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ABSTRACT

Consisting mainly of charts, graphs, and lists, this publication presents materials used in the Delaware County Community College (DCCC) planning and institutional research processes. Guidelines for establishing DCCC mission, goals, objectives, and management by objectives performance standards relative to planning changes, instructional programs, and institutional support are reviewed. The relationship of DCCC research to college goals, program evaluation, outcomes measurement (using the Tex-SIS System, Student Data Analysis, and NCHEMS Costing and Simulation), and community needs assessment are explored. Copies of survey instruments available from Tex-SIS are included, covering student educational intent, course withdrawal, graduate follow-up, exit interviews, and non-returning students. DCCC direct cost summary comparisons for 1974-75 and 1975-76, and fiscal year student credit hours by program and by discipline are presented. A summary of "A Comprehensive Assessment of Adult Educational Needs in Delaware County" and a bibliography are included. (TR)

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DELAWARE COUNTY COMMUNITY COLLEGE

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A PLANNING PROCESS
AND

THE INTEGRATION OF INSTITUTIONAL RESEARCH

May 1978

JC 780 361

R. SPENCER S. DOCK S. WETZEL

OFFICE OF MANAGEMENT SYSTEMS, PLANNING AND RESEARCH

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INTRODUCTION

During the past year, Delaware County Community College has been asked to present its planning and institutional research process to several professional groups. Those rounds of discussions finally culminated in a presentation at the National Conference on Institutional Research and Planning in Atlanta, Georgia on April 7-8, 1978.

After the Conference, we received numerous requests for hard copy of the transparencies which assisted in that presentation. To such an end, we present this record as an example of the materials which we use in our College planning process. We do hope that it meets your desire for cogent, up-to-date information about planning in an institution of higher education.

If you have additional questions, please do not hesitate to contact us at the College (215-353-5400).

Richard Spencer
Stephen Dock
Susan Wetzel

I. DCCC PLANNING PROCESS

CHANGES IN PLANNING

	OLD APPROACH (STATIC)	NEW APPROACH (DYNAMIC)
Purpose	Get a "Plan"	Achieve Results
Premise	Forecasts Are Accurate	Future Is Unpredictable
Technique	Static, Periodic	Dynamic Continuous
Process	Traditional, Authoritative	Decentralized, Participative
Responsibility	Top Management Vice President for Planning Central Planning Staff	Every Manager Director Planning Services Coordination
Time Span	10-20 Years	1-5 Years
Support	Resistance, Resentment	Enthusiasm-Participation
Durability	Tapers to Discouragement	Growing Value and Support
Cost/Benefit	Too Much Time and Effort Higher Cost Limited Benefits	Less Time and Effort Lower Cost Better Results

PLANNING AND MANAGEMENT ENVIRONMENT

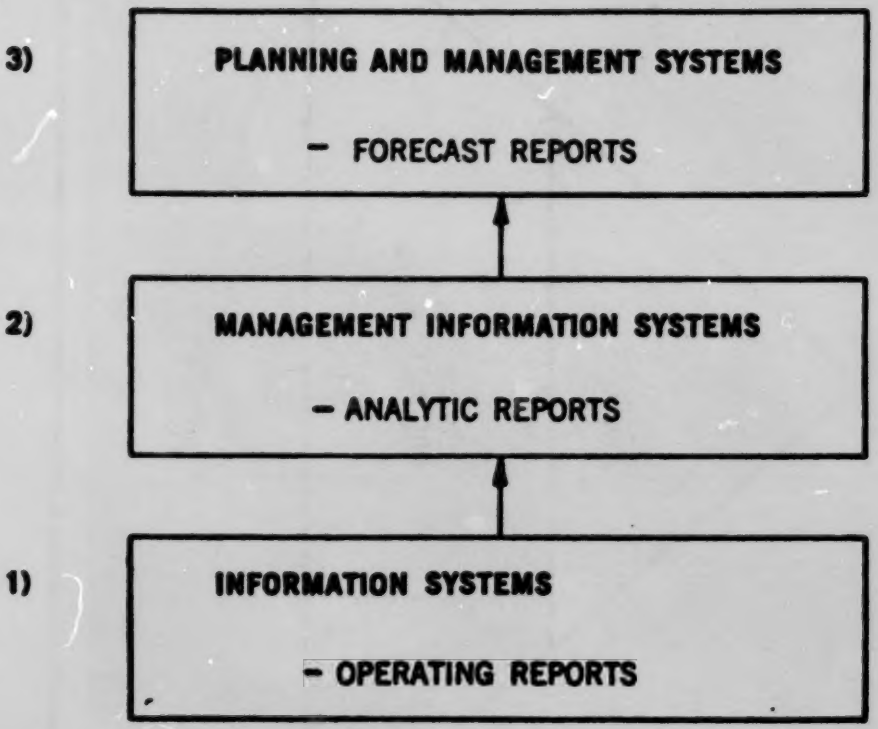
*NEW ROLES OF POSTSECONDARY EDUCATION DECISION MAKERS

- -IDENTIFYING AND UNDERSTANDING EDUCATIONAL OUTCOMES
- -ACQUIRING AND ALLOCATING RESOURCES MORE EFFECTIVELY
- -COMPETING SUCCESSFULLY FOR PUBLIC AND PRIVATE FUNDS
- -RESPONDING TO DEMANDS FOR PROGRAM COST/BUDGET/OUTCOME INFORMATION
- -RESPONDING TO MORE CONSTITUENCIES (ACCOUNTABILITY)

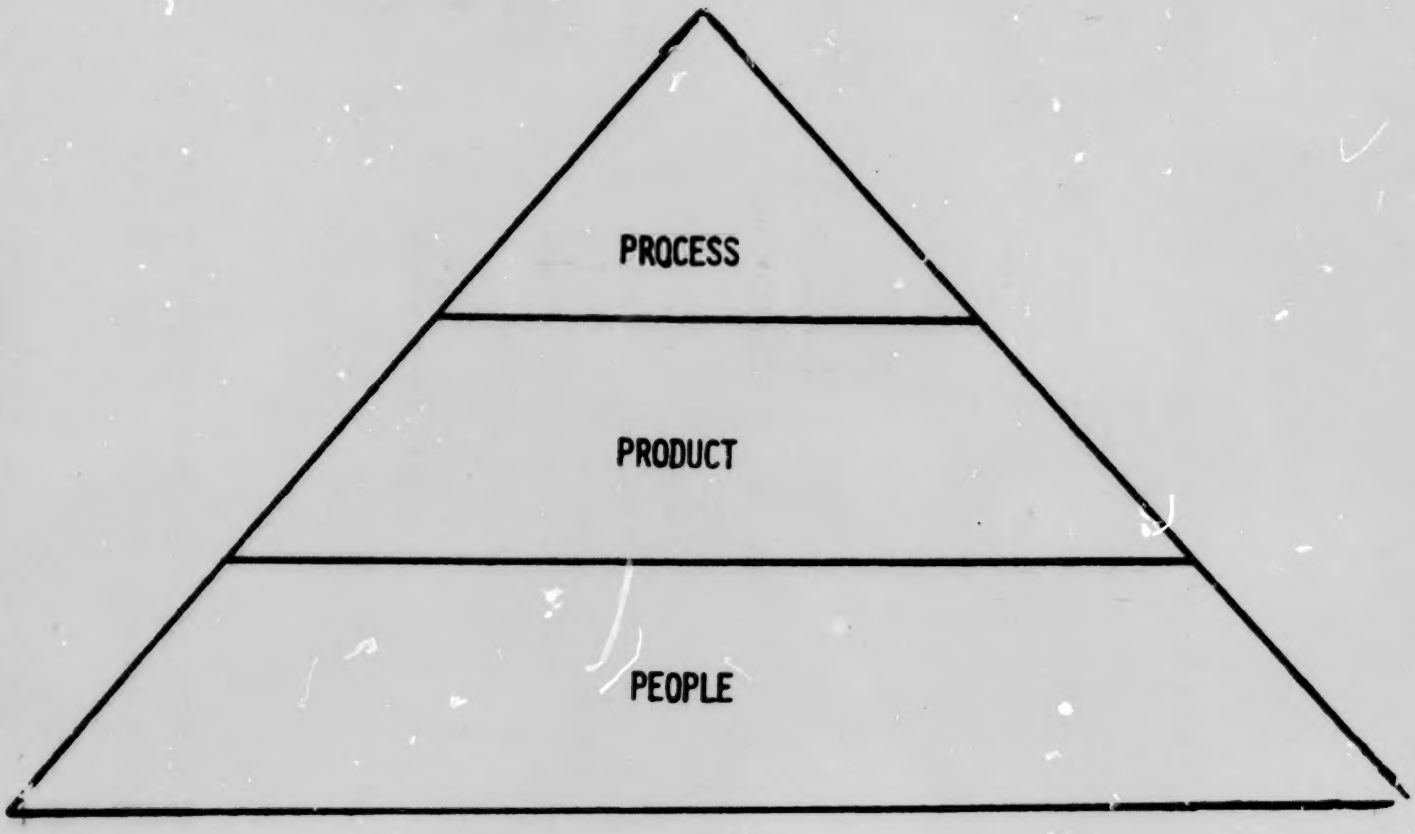
*NEW NATURE OF INFORMATION NEEDS

- -PROGRAM ORIENTED
- -STANDARDIZED/COMPARABLE
- -COMPREHENSIVE
- -MORE USEFUL/APPLICABLE

HIERARCHY OF INFORMATION SYSTEMS *



*Sheehan, Bernard S., Report One-Western Canadian Universities Task Force on Information Needs and Systems, University of Calgary, Alberta, Canada, November, 1972.



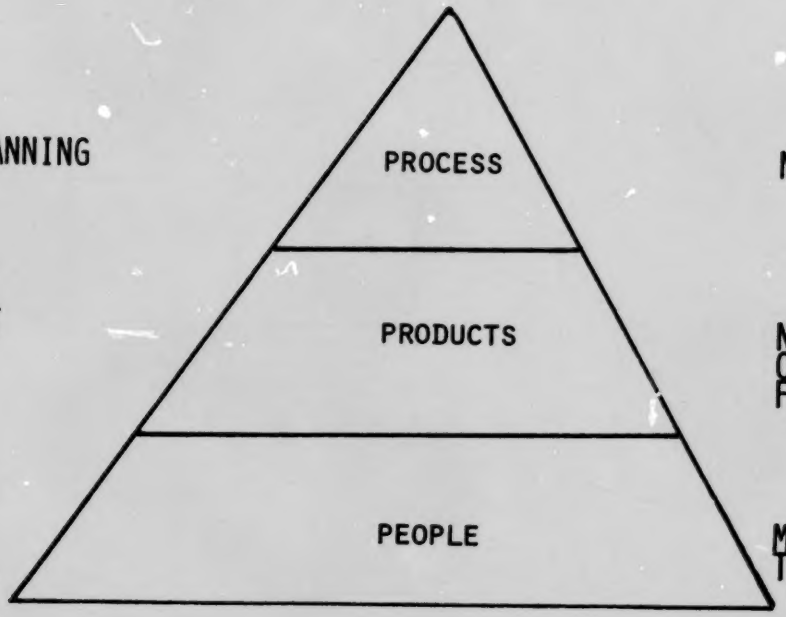
DCCC-MSPR 1977

PLANNING/MANAGEMENT/EVALUATION DEVELOPMENT AT DCCC

TO USE IN A PLANNING

IN STATE OF ART

TO TRAIN



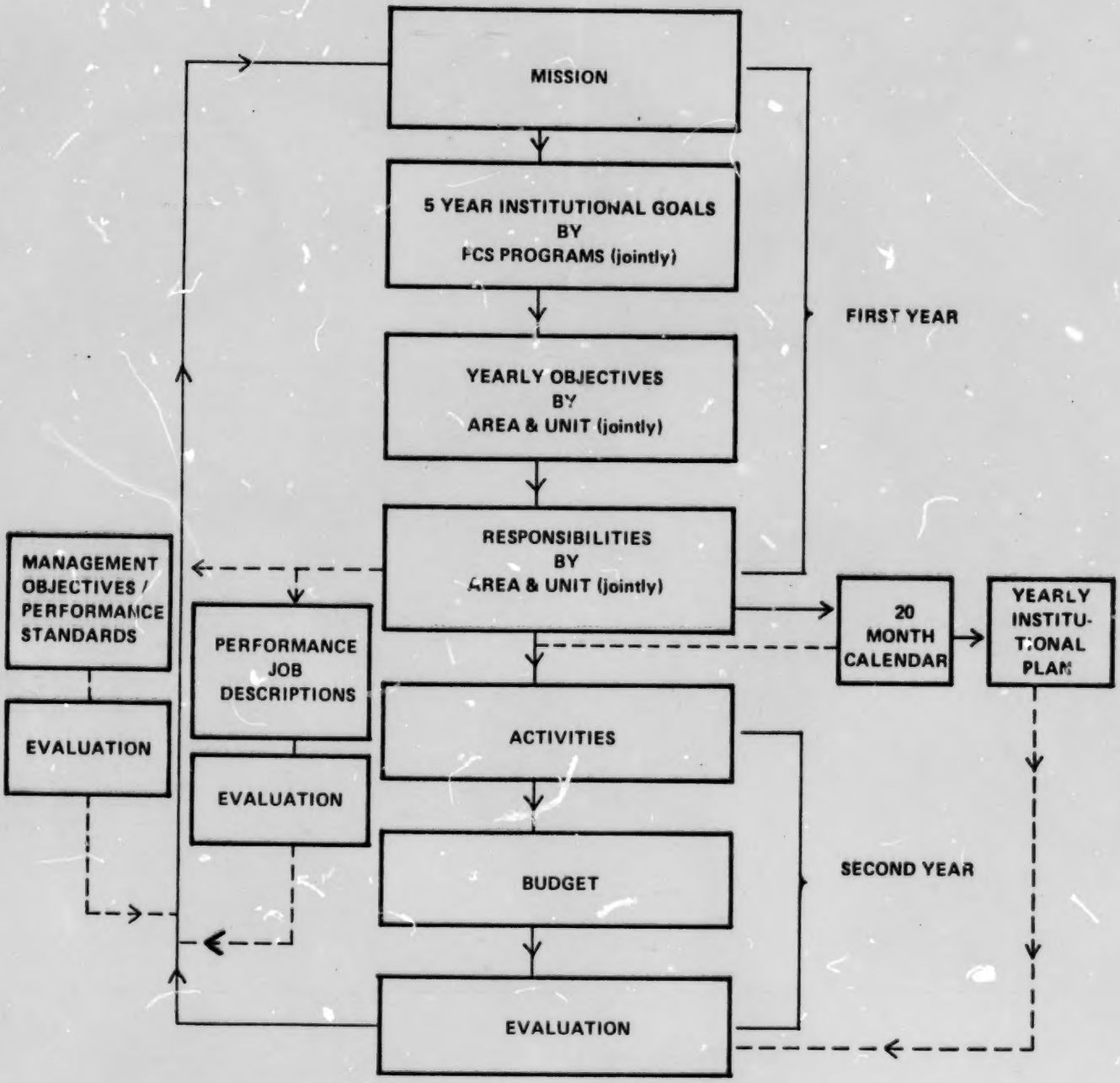
NCCUP PLANNING PROCESS

NCHEMS COSTING, MODELING, OUTCOMES MEASURES, TEX-SIS FOLLOW-UP SYSTEM

MANAGEMENT EFFECTIVENESS TRAINING

DELAWARE COUNTY COMMUNITY COLLEGE

PLANNING PROCESS



MISSION

The broadest, most comprehensive statement that can be made about central or continuing purpose. The chief function or responsibility of an organization which justifies continuing support of the organization by society and which provides initial direction for the management or administration of the organization. The purpose of the mission statement is to provide a focus for the resources of the organization.

MISSION

The mission of Delaware County Community College is to offer educational programs and services which are comprehensive, accessible, flexible and community centered in order to enhance the development of our community and its residents.

An institutional goal should:

* Represent a logical extension of the mission statement.
* Be outcome-oriented.
* Be explicit.
* Be supported by a series of objectives.

An acceptable objective will:

* Be outcome-oriented.
* Be measurable, suggesting the quantitative or qualitative degree, amount, or level of the achievement or change being sought.
* Be focused on singular rather than multiple outcomes.
* Be of sufficient scope to embrace a series of discrete tasks and major events.
* Be consistent with one or more institutional goals.

1.0 INSTRUCTIONAL PROGRAMS (cont.)

Expand evening and weekend programs by 15% of all programs offered by the College in a manner that will enable the evening or weekend student to obtain a degree.

Develop a philosophy of general education requirements and minimum competencies applicable to all College programs. (A)

Eliminate course overlapping and course proliferation.

Specify learner competencies for all existing curricula and for 50% of the existing courses including learning objectives, activities, and criteria-referenced measurement.

Develop systematically, for 30% or more of existing courses, alternate teaching/learning strategies (e.g., computer assisted instruction, audio-tutorial) to accommodate individual student cognitive learning patterns.

Develop and implement alternate load formulas to provide for alternate modes of instruction and differentiated staffing while maintaining the current ratio of student credit hours per faculty.

Develop a long range schedule to enable full- and part-time students to know the sequencing of courses and time parameters needed to complete a degree or certificate.

Rewrite program and course descriptions in competency-based terms.

Infuse career education concepts through competencies in all courses.

Expand by 20% the non-degree, non-credit enrollment on- and off-campus.

Increase FTE student enrollment in the occupational curriculums to 40% of the total FTE.

6.0 INSTITUTIONAL SUPPORT PROGRAM

6.1 Executive Management

Conduct a comprehensive training program to improve the performance of all College personnel.

Develop an information network to supply the information required for planning and decision-making at all levels within the organization.

Implement ongoing evaluation processes to evaluate all programs, services, and personnel.

Implement a systematic community needs assessment process which will enable executive management to evaluate and respond to community needs. (B)

Expand sponsorship to extend opportunities to all residents of the community on an equitable basis.

Maintain expenditures less than or equal to revenues and keep actual fiscal year operating cost increases per FTE student less than or equal to the higher education index.

Publish an updated policy manual and implement a system for continuous review and dissemination of policies and procedures for all levels of the institution.

Enroll at least 4420 FTE students in regular instruction and 375 FTE students in community services and volunteer instruction.

Integrate the National Center for College and University Planning process into the ongoing management activities of College personnel.

Obtain additional revenues from existing funding sources and develop new funding sources to meet institutional needs. (C)

Incorporate an approved operating advisory system to assure the participation of all constituencies within the College.

Establish comprehensive guidelines and implement a process based on the guidelines for the selection, development, evaluation, and retention of administrative staff consistent with MBO performance standard program.

(A)

1.0 INSTRUCTIONAL PROGRAMS

1.2 Develop a philosophy of general education requirements and minimum competencies applicable to all college programs.

1977-78 - A review of the literature in general education will be completed and summarized.

An institutional analysis of current general education core requirements in all programs will be completed.

The first draft of a philosophical statement to cover all programs will be written and submitted to the appropriate advisory committee for review by September, 1978.

1978-79 - A philosophy of a general education core for all college programs will be approved by the President's staff and the Board of Trustees.

A tentative list of program competencies in the general education core will be in place for review by the faculty and the appropriate advisory committee.

1979-80 - Minimum general education core competencies for all college programs will be approved.

RESPONSIBILITY: MSPR

12

6.1 EXECUTIVE MANAGEMENT

(B)

Implement a systematic community needs assessment process which will enable executive management to evaluate and respond to community needs.

1977-78	Conduct a comprehensive community needs survey and disseminate the results by January 31, 1978.
1978-79	Evaluate the community needs survey and modify the process as appropriate by December 31, 1978.
1979-80	Conduct a mini-update of the community needs survey and disseminate the results.
1980-81	Conduct a mini-update of the community needs survey and disseminate the results.
1981-82	Conduct a comprehensive community needs sruvey and disseminate the results.

6.1 Executive Management

(C)

Goal

6.1.10 Obtain additional revenues from existing funding sources and develop new funding sources to meet institution needs.

Objectives

1977-78 By January 1, 1978, have retained an individual for the position of Director of Development.

By April, 1978, recommend the by-laws and organization of a DCCC Educational Foundation to the B of T for approval.

By June 30, 1978, preparation of a Long Range Development and Fund Raising Plan which outlines the types of fund raising activities to be conducted to meet the needs of the institution.

1978-79 Implement a scholarship fund raising campaign to meet student financial needs as identified by the Financial Aids Office. (6.7.3)

Begin to develop an effective alumni association, including an annual giving campaign.

Begin to identify sources and take the necessary steps to secure governmental grant/aid funds.

Begin to cultivate potential individual and institutional donors.

Plan and begin implementing a fund raising campaign to raise funds for needed facilities and improvements.

Implement a campaign to raise 50% of funds required to provide facilities for physical development and cultural activities. (6.7.1 and 6.7.2)

Develop a plan to meet the operating costs of cultural programs up to 50% in five years.

MANAGEMENT OBJECTIVES/PERFORMANCE STANDARDS

1977 - 1978

AREA: Vice President of the College

STAFF MEMBER N. Dean Evans

PERFORMANCE RESPONSIBILITIES	OBJECTIVES & STANDARDS	PERFORMANCE ACHIEVED	PERFORMANCE EVALUATION
	Performance standard: Satisfactory analysis of the data from the needs survey as approved by the Vice President of the College and the President's staff.		
	An analysis of current general education core requirements will be completed by July 1, 1978, and the first draft of a philosophical statement on general education for all programs will be submitted to the I.A.C. by September, 1978. (A)		
	Performance standard: Meeting above dates with analysis and statement approved by President's staff.		

MANAGEMENT OBJECTIVES/PERFORMANCE STANDARDS
1977-1978

AREA: MSPR

STAFF MEMBER: Richard L. Spencer

PERFORMANCE RESPONSIBILITIES	OBJECTIVES & STANDARDS	PERFORMANCE ACHIEVED	PERFORMANCE EVALUATION
To provide research support for planning activities.	By March 1, 1978, to have completed a community needs assessment for internal distribution. By June 30, 1978, to report the findings to the Board of Trustees. Performance Standard: The assessment will meet the criteria outline by Daniel Stoufflebeam at the University of Michigan. By February 1, 1978, the President's Staff will have approved the report for internal distribution.	(B)	
To provide a college-wide planning framework.	To present to President's Staff at a December meeting the final outline and implementation of the long-range planning process for 1979-80 fiscal year. Performance Standard: President's Staff acceptance.		

MANAGEMENT OBJECTIVES/PERFORMANCE STANDARDS

1977-78

AREA: Business Affairs

STAFF MEMBER: R.W. Slough

PERFORMANCE RESPONSIBILITIES	OBJECTIVES & STANDARDS	PERFORMANCE ACHIEVED	PERFORMANCE EVALUATION
Appointment of a Director of Development	By Jan. 18, 1978 have retained an individual in the position of Dir. of Development.		
DCCC Educational Foundation	By April 1, 1978 to recommend to the Bd. of Tr. for approval the By-laws and organization of a DCCC Educational Foundation. Performance Standard: Proposal will meet the institution's fund raising requirements and will meet IRS and other legal requirements.	(C)	

16 CC 22

II. DCCC INSTITUTIONAL RESEARCH

RELATIONSHIP TO PROGRAM EVALUATION

2.0 Research Program

Develop an ongiong validation system for evaluation of existing programs.

4.0 Academic Support Program

Develop a system for evaluation of new programs consistent with the institutional PME plan.

6.1 Executive Management

Implement ongoing evaluation processes to evaluate all programs, services, and personnel

RELATIONSHIP TO INSTITUTIONAL RESEARCH AND COMMUNITY NEEDS ASSESMENT

4.0 Academic Support Program

Implement new programs identified in a community needs survey that are consistent with the mission and within the financial resources of the College.

5.0 Student Support Program

Reduce negative attrition by 50% in all curricula and courses

6.2 Financial Management Program

Implement processes to increase cost effectiveness of College programs and services

PME GUIDELINES FOR DEVELOPMENT AND EVALUATION OF PROGRAMS 18

Basic Concepts

... Applies to instructional and support programs

... Same process used for developing new programs proposals and evaluation of existing programs

... Uses self-evaluation by team with common framework and research staff support.

... Recognizes that multiple publics are necessary

... Is objective based process compatible with competency based instruction.

... Is "State-of-the-art" process modeled upon Metfessel and Michael paradigm for multiple criterion measures of the evaluation of the effectiveness of school programs

IMPLEMENTATION

MAY 77 Curriculum Guidelines group review and modify draft guidelines

MAY 77 New curriculum proposals evaluated using PME Guidelines

JAN 78 Five curricula and three support services begin self-evaluation process.

FEB 78 NCHEMS training for evaluation team leaders HELS

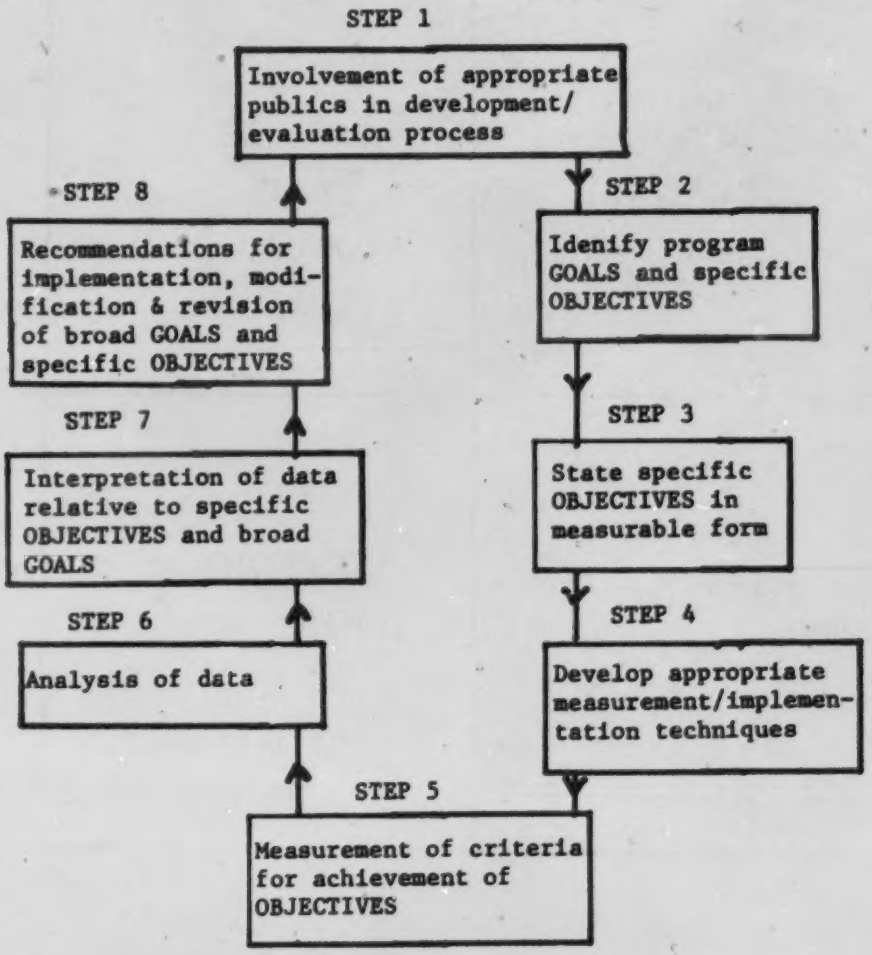
Team Leader's Evaluation notebook developed

Apr 78 Curricula and support services complete goals and potential measures

Jun 78 Curricula and support services complete objectives and measurement plan

FIGURE 1

PME DEVELOPMENT/EVALUATION PROCESS


STEP 1
Involvement of appropriate publics in development/ evaluation process
STEP 2
Idenify program GOALS and specific OBJECTIVES
STEP 3
State specific OBJECTIVES in measurable form
STEP 4
Develop appropriate measurement/implementation techniques
STEP 5
Measurement of criteria for achievement of OBJECTIVES
STEP 6
Analysis of data
STEP 7
Interpretation of data relative to specific OBJECTIVES and broad GOALS
STEP 8
Recommendations for implementation, modification & revision of broad GOALS and specific OBJECTIVES

TYPES OF MEASURES

	QUANTITATIVE	QUALITATIVE
OBJECTIVE	STANDARD ACHIEVEMENT TEST	PANEL OF EXPERT JUDGES
SUBJECTIVE	ATTITUDINAL SURVEYS	UNSOLICITED LETTERS FROM STUDENTS, EMPLOYERS, ETC.

DESIRED: MULTIPLE EVIDENCES FOR EACH GOAL

FIGURE 2

HIERARCHICAL FRAMEWORK
FOR
MERGING COMPETENCIES
WITH
COLLEGE MISSIONS AND GOALS

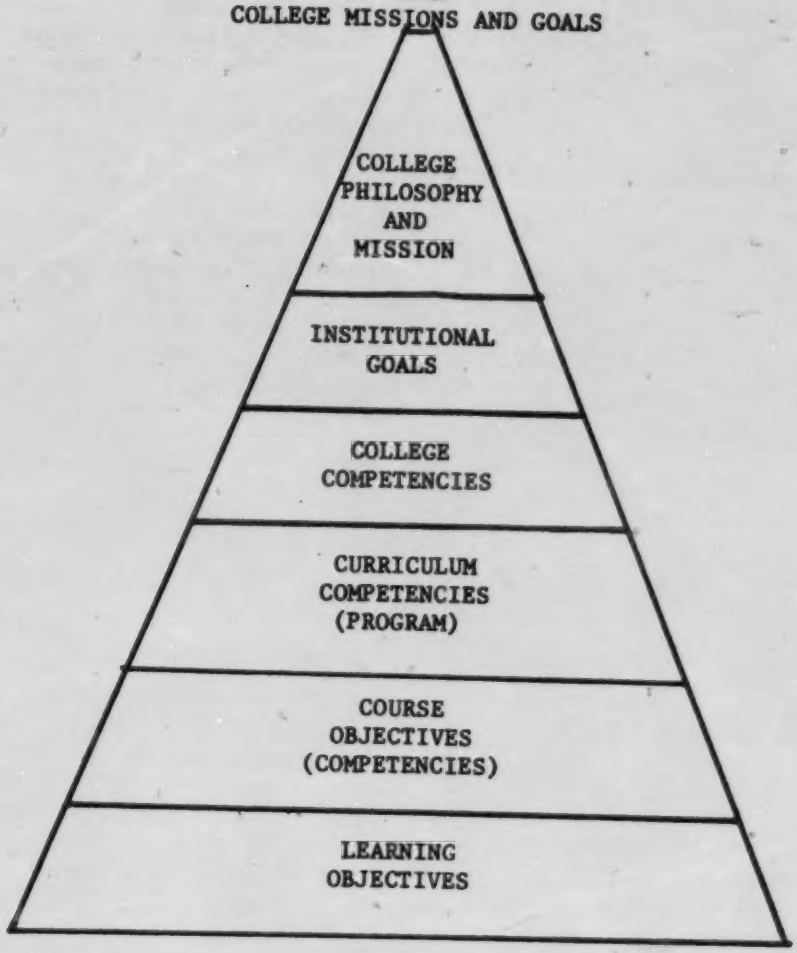


TABLE 1

PROGRAM PROPOSAL SCREENING CRITERIA

CRITERIA	QUESTIONS	ANSWER CATEGORIES	NUMERICAL RATINGS
Mission Compatability	How does the proposed program fit with the stated goals of DCCC?	Does not fit	0
		Is appropriate	1
		Is essential to fulfill mission	2
		Has been identified as priority development area	3
Need	What is the demand for the program in terms of enrollment and career opportunities for graduates?	No demonstrated demand	0
		Evidence of student interest	1
		Documented demand from 30 or more potential students	2
		Documented demand for career opportunities	3
	How long can the student demand for the program be expected to last?	No evidence to estimate	0
		Estimate 1-3 years	1
		Estimate 3-6 years	2
		Estimate over 6 years	3
	How long can career opportunities be expected to last?	No evidence to estimate	0
		Estimate 1-3 years	1
		Estimate 3-6 years	2
		Estimate over 6 years	3
Resources	How much can the program be expected to cost?	Expense greater than income	0
		Expense equal to income	1
		Expense less than income	2
	Are additional resources required to implement the program?	Major physical plant addition or alteration	0
		Laboratory facility or specialized equipment	1
		Additional personnel	2
		Instructional supplies	3
Duplication	Will the program unnecessarily duplicate comparable program opportunities at other area institutions?	Program openings exist at one or more Del.Co. institutions	0
		Program openings exist at one or more "high cost" Del.Co. institutions.	1
		Program exists but openings limited at one or more Del. Co. institutions	2
		No comparable programs exist in Del. Co.	3

MAJOR CATEGORIES IN NCHEMS INVENTORY OF OUTCOMES AND MEASURES

1.0 Student Growth and Development
- 1.1.0 Knowledge and Skills Development
  - 1.1.1.00 Knowledge Development
  - 1.1.2.00 Skills Development
  - 1.1.3.00 Knowledge and Skills Attitudes, Values, and Beliefs
- 1.2.0 Social Development
  - 1.2.1.00 Social Skills
  - 1.2.2.00 Social Attitudes, Values, and Beliefs
- 1.3.0 Personal Development
  - 1.3.1.00 Student Health
  - 1.3.2.00 Student Personal Attitudes, Values, and Beliefs
- 1.4.0 Career Development
  - 1.4.1.00 Career Preparation
  - 1.4.2.00 Career Attitudes, Values, and Beliefs

2.0 Development of New Knowledge and Arts Forms

3.0 Community Development and Services
- 3.1.0 Community Development
- 3.2.0 Community Service
- 3.3.0 Longer-Term Community Effects

SUBJECT NO.

3M CATALOG NO. 1
3M CENTER, ST. P
MADE IN U. S. A

OUTCOME VARIABLES	POTENTIAL MEASURES
1.1.1.02 Specialized Knowledge The familiarity with and understanding of facts and principles in the particular fields in which the student elects to study. The student's depth of knowledge.	1.1.1.02 Specialized Knowledge Measures - Average student score on those items from tests (e.g., CLEP Subject Exams, or GRE Area Exams) that measure depth of knowledge in special fields of study. - Average student change in depth of knowledge by discipline area as determined by comparing entering specialized knowledge test scores to subsequent test scores (e.g., on CLEP Subject Exams or GRE Area Exams) after ____ years. - Number of graduates accepting employment in their major field of study as a percentage of total graduates in that field. - Number of students passing certification or licensing exams (e.g., bar exam, CPA) on first attempt as a percentage of all students taking the exam. - Average student-reported score on scale measuring the degree of satisfaction with their knowledge gain in specialized fields of study (based on a student survey). - Number of graduates accepted for study in post-baccalaureate degree programs as a percentage of those applying.

PLANNED OUTCOMES IDENTIFICATION

Academic Unit: *Mechanical Engineering Department*

(a) Focus of Analysis: *Mechanical Engineering Undergrad. Prog*

Academic Period: *1976-77 Academic Year*

(b) Goals	(c) Outcomes	(d) Outcome Measures		
		Description	Planned	Actual
-To develop the career potential of each student.	*-Ability to seek, gain, and maintain a particular level and kind of employment.*	*-Percentage of undergraduates (who wish jobs) receiving job offers.*	*50% within 90 days of graduation*	
		-Percentage of undergraduates in jobs related to their major field of study.	*10% more than last year*	

DCCC OUTCOMES MEASUREMENT PROGRAM

THREE COMPONENTS: TEX-SIS FOLLOW-UP SYSTEM, ANALYSIS OF STUDENT DATA, EVALUATION TRAINING AND SUPPORT

BASIC CONCEPTS

... THE PROGRAM IS THE UNIT OF INTEREST

... PLANNING & RESEARCH STAFF ARE A SUPPORT SERVICE TO THE ACADEMIC AND STUDENT SERVICES

... OUTCOMES DATA WILL BE USED IN THE PLANNING AND BUDGETING PROCESSES

... PLANNING & RESEARCH STAFF WILL ROUTINELY COLLECT, ANALYSE AND REPORT OUTCOMES DATA BY CURRICULUM, SEX, AND AGE CATAGORIES FOR USE BY PROGRAM MANAGERS

... PLANNING & RESEARCH STAFF WILL ASSIST IN THE DESIGN, PLANNING, AND INTERPRETATION OF RESEARCH EFFORTS, HOWEVER PROGRAM MANAGERS ARE RESPONSIBLE FOR ACTUAL EXECUTION OF RESEARCH PROJECTS

... OUTCOMES DATA ARE ACCESSIBLE TO ALL MEMBERS OF THE COLLEGE COMMUNITY

... WE SEEK TO CREATE AN INFORMED CLIMATE FOR DECISION MAKING

TEX-SIS FOLLOW UP SYSTEM

1. Developed for use in TEXAS community colleges (53 colleges)
2. Funded by Texas Education Agency
3. Development lasted 2 years; involved hundreds of faculty, staff, and students
4. System is based on relationship of STUDENT'S GOAL to STUDENT'S ACCOMPLISHMENTS
5. Thorough Documentation and validation studies exist
6. Provides comparable data
7. TEX-SIS is presently being used in Illinois, New Jersey, Penna., as well as all TEXAS community colleges.
8. SURVEY INSTRUMENTS:

   STUDENT EDUCATIONAL INTENT

   WITHDRAWAL FOLLOW-UP (EXIT INTERVIEW)

   Nonreturning Student follow-up

   Graduate follow up

   EMPLOYER FOLLOW UP

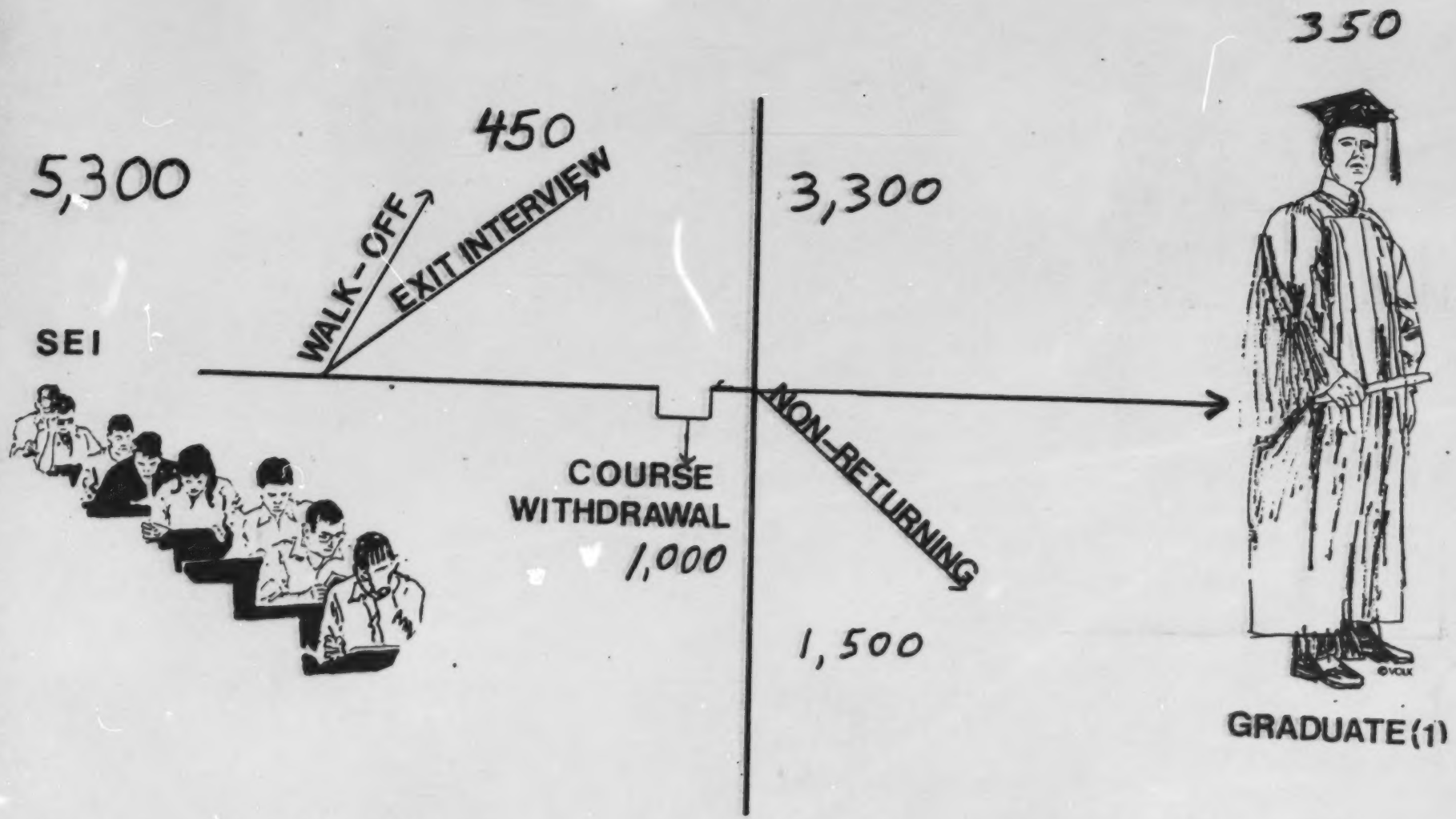
   COURSE WITHDRAWAL FOLLOW-UP

9. All questionnaire items were developed using a DELPHI process and are "ACTIONABLE".

10. Reports distributed to date;

Non-Returning Students	Student Educational Intent
Long Term Alumni	Course Withdrawal
Exit Interview	1977 Graduate Follow-up

OUTCOMES MEASUREMENT SYSTEM



MATERIALS AVAILABLE FROM TEX-SIS

1. Monographs - $2.50 each

   Student Educational Intent
   Course Withdrawal
   College Withdrawal
   Graduate First Year

2. Detailed Documentation Package - $79.00

   Activities Manual
   Procedures Manual
   Data Processing Manual
   7 Subcontractors Reports
   Survey Masters

3. Software - $650.00

   14 Sets Keypunch Instructions
   Program Listings
   Source Code (on your tape)

ORDER ABOVE MATERIALS BY WRITING TO:

Ms. Toni Hall
Chief Consultant
Texas Education Agency
201 East Eleventh Street
Austin, TX 78701

SURVEY TITLE: Student and Educational Intent

PURPOSE: To determine the goals of DCCC's entering students, the means they plan to use to persue this goal, and their future plans for attending DCCC.

SAMPLE: 686 students who were new students at DCCC and who registered at walk-in registration.

PROCEDURES: A six closed item survey was adapted from the Tex-SIS System. Tex-SIS is a system of surveys which is currently being implemented at DCCC. Complete documentation of this Student Information System can be obtained through Management Systems Planning and Research. This survey was administered by registration personnel to new students at walk-in registration, Fall 1977. The limitations of sampling only walk-in registrants is realized and plans have been made for a more widespread implementation during Winter '78.

RESULTS: The results of this survey are presented in tabular form on the following page. A copy of the survey itself is also attached.

EDUCATIONAL INTENT SURVEY

Student No. ☐☐☐☐☐☐☐

Please circle the appropriate response number.

1 (13) What is your PRIMARY educational goal in attending this college?

1 Improvement of existing "job skills"
2 Preparation for "job to be obtained"
3 Transfer credit
4 Personal interest
5 Other (describe)_____

2 (14) How definite are you concerning your above stated educational goal?

1 Definite
2 Fairly definite, subject to change
3 Not at all definite

3 (15) How do you expect to accomplish the above goal?

1 Selected course(s)
2 Certificate Program
3 Two-year Associate Degree Program
4 Other (describe)_____

4 (16) A. Do you expect to complete your goal AT DCCC by the end of this semester?

1 Yes
2 No

(17) B. Do you plan to enroll at DCCC in the future?

1 Yes; when? → 1 Next Fall
2 Next Winter
3 Next Summer sessions
4 Later Date

2 No
3 Undecided

TITLE OF SURVEY: Course Withdrawal

RATIONALE: 1. Follow-up of potential college withdrawals and non-returning students should be immediate.

2. Follow-up studies should include all students.

PURPOSE: To monitor patterns of course withdrawal for the purpose of preventing college withdrawal.

DATA TO BE COLLECTED BY: Admissions Office.

WHEN DATA IS TO BE COLLECTED: After the drop/add period at the time when the student withdraws from acouse. Completed forms should be returned to MSPR weekly.

INSTRUCTIONS FOR COMPLETION:

Item 1 This form will accommodate students who are withdrawing from one or two courses. If more than 2 courses are being dropped , additional cards must be used. To the right of the example, the student enters the department name (3 letters) in the first space. In the space beneath the department, the course number is entered, followed by the section number. The student should refer to the drop slip for this information.

2 The student should circle the number corresponding to the reason(s) he/she is dropping the above course(s). Only one reason should be circled for each course entered.

3 If a student wishes to see a counselor to discuss academic or other problems, he/she should indicate so in this item. A counselor will follow-up on positive responses.

4 Any comments and/or suggestions should be listed here.

Graduate Follow-up

DEFINITION: Any student who leaves DCCC after completing his/her educational objective.

A. NCHEMS Student Outcomes Questionnaire for Program Completers was mailed to all May 1976 and December 1976 graduates within 30 days of graduation. Analyses are available by sex, age, and curriculum.

B. Graduate Follow-up (1) is to be mailed on September 1, 1977 to all May 1977 graduates. This survey is part of the DCCC adaptation of Tex-SIS.

C. Long Term Alumni Survey was mailed on June 2, 1977 to all 926 graduates of DCCC from 1969 to 1972. Results to be analyzed in October 1977.

PROJECT FOLLOW UP

GRADUATE SURVEY (1)

35

Please make corrections to the information above if necessary.

PLEASE CIRCLE APPROPRIATE NUMBER(S) WITHIN EACH CATEGORY BELOW. (e.g. ①)

BEGIN HERE ↓ SECTION A

EVERYONE SHOULD ANSWER THIS SECTION.

1 (16) What was your PRIMARY objective in attending DCCC? (circle one)

1 Improvement of existing "job skills"
2 Preparation for "job to be obtained"
3 Transfer to a 4-year college
4 Personal interest
5 Other (describe) _____

2 (17) Which one of the below best describes your present status?

1 Employed, full time
2 Employed, part time
3 Unemployed, seeking employment
4 Military, full time active duty
5 Continuing education at higher level
6 Unavailable for employment (describe) _____

3 Please rate those courses in your major field of study according to how well they fulfilled your own individual needs.

		Very Good	Good	Neutral	Poor	Very Poor
a. Quality of instruction	(18)	5	4	3	2	1
b. Grading/Testing	(19)	5	4	3	2	1
c. Instructor interest	(20)	5	4	3	2	1
d. Content of course(s)	(21)	5	4	3	2	1
e. Instructional Media	(22)	5	4	3	2	1
f. Class size	(23)	5	4	3	2	1

4 Please rate below only those college services that you have utilized according to how well they fulfilled your own individual needs.

		Very Good	Good	Neutral	Poor	Very Poor
a. Financial aids	(24)	5	4	3	2	1
b. Counseling	(25)	5	4	3	2	1
c. Job placement service	(26)	5	4	3	2	1
d. Course advisement	(27)	5	4	3	2	1
e. Tutoring services	(28)	5	4	3	2	1
f. Veterans services	(29)	5	4	3	2	1
g. Learning lab/packages	(30)	5	4	3	2	1
h. Cultural activities	(31)	5	4	3	2	1
i. Library services	(32)	5	4	3	2	1
j. Student recreational activities	(33)	5	4	3	2	1
k. Day care services	(34)	5	4	3	2	1
l. Career center	(35)	5	4	3	2	1
m. Scheduling & Registration	(36)	5	4	3	2	1
n. Admissions/placement	(37)	5	4	3	2	1
o. Individual career counseling	(38)	5	4	3	2	1

5 (39) Which statement best describes your feeling about your educational experience at DCCC?

1 Very satisfied
2 Satisfied
3 Neutral
4 Disappointed
5 Very disappointed

47

SECTION B

IF YOU HAVE ENROLLED IN ANOTHER COLLEGE SINCE YOUR ENROLLMENT AT OUR COLLEGE, PLEASE ANSWER THIS SECTION. IF NOT, GO TO SECTION C.

1 (40) What is the name of your current (or most recently attended) college?

Name of college _____

City and State _____

Major _____

2 (41) Did you have problems transferring to the college indicated above?

1 Yes; what? ↓
2 No

(42)
1 Transferring credit hours
2 Transcript problems
3 Admissions problems
4 Other (describe) _____

3 (43) How many credit hours earned at our college were not accepted at the college indicated above? (circle one)

1 All credit hours accepted
2 Lost 1-3 credit hours
3 Lost 4-6 credit hours
4 Lost 7-12 credit hours
5 Lost 13-21 credit hours
6 Lost more than 21 credit hours

4 (44) (45) If you are currently enrolled in college, please indicate your current status and classification at the college indicated above.

Status →	Classification
1 Part-time student (less than 12 hours)	1 Freshman
2 Full-time student (12 or more hours)	2 Sophmore
	3 Junior
	4 Senior
	5 Graduate Student
	6 Other _____

5 (46) How well did the courses you completed at DCCC prepare you for continuing your education?

1 My preparation was excellent
2 My preparation was satisfactory
3 Good in some areas only
4 Fair, but all areas could have been better
5 My preparation was inadequate

OVER PLEASE!

SECTION C

IF YOU HAVE BEEN EMPLOYED SINCE YOU LEFT OUR COLLEGE, PLEASE ANSWER THIS SECTION. IF NOT GO TO SECTION D.

1

A. IF YOU ARE CURRENTLY EMPLOYED, is your present occupation related to the courses you have completed at DCCC?

(47)

1 Yes, directly related
2 Yes, closely related
3 No

B. IF NO, have you been employed in an occupation related to the courses you completed at our college since you left DCCC?

(48)

1. Yes, directly related
2 Yes, closely related
3 No (IF NO, Go to Section D)

2

Please complete the information below regarding the occupation related to the courses completed at DCCC.

(49)

Job title _____

Name of Employer _____

Street address of Employer _____

City of Employment _____

May we contact your employer concerning your job description and skills?

1 Yes
2 No

3

How would you rate the training you received at DCCC in relation to its usefulness to you in performing your job? (circle one)

(50)

1 Very good
2 Good
3 Neutral
4 Poor
5 Very Poor

4

Please circle below if the course(s) you took at DCCC helped you in your occupational area in any of the following ways. (circle all that apply)

(51) 1 Helped to obtain job
(52) 2 Helped performance on present job
(53) 3 Helped advance on present job
(54) 4 None of the above
(55) 5 Other (describe) _____

5

If you are employed full-time, please indicate your approximate average monthly salary range (gross) below. This information, when combined with other members of your graduating class, will provide valuable information to other individuals in career planning.

(56-57)

1 Up to $300
2 $300 - $399
3 $400 - $499
4 $500 - $599
5 $600 - $699
6 $700 - $799
7 $800 - $899
8 $900 - $999
9 $1,000 - $1,099
10 $1,100 - $1,199
11 $1,200 - $1,299
12 $1,300 - $1,399
13 $1,400 - $1,499
14 $1,500 - $1,599
15 $1,600 - $1,699
16 $1,700 - Up

6

Were you employed in your occupational area PRIOR to enrolling in the courses completed at DCCC?

(58)

1 No
2 Yes

7

How would you rate the availability of jobs in your occupational area?

(59)

1 Very good
2 Good
3 Neutral
4 Poor
5 Very Poor

18

SECTION D

EVERYONE SHOULD ANSWER THIS SECTION.

36

1

If your occupational area is not related to the courses you have completed at our college (as indicated in Section C) please circle each reason which applies. If occupational area is related to courses completed, go to Question 2.

(60) 1 Transferred to a four-year college
(61) 2 Not sufficiently qualified for a job in my field of college preparation
(62) 3 Preferred to work in another field
(63) 4 Found a better paying job in another field
(64) 5 Could not find a job in field of preparation
(65) 6 Worked previously in field of preparation, but changed
(66) 7 Other (describe) _____

2

How do you see the courses completed at our college in terms of your career plans?

(67)

1 of immediate, direct benefit
2 of long term, direct benefit
3 of indirect benefit
4 of no benefit

3

Are you interested in taking other courses at our college? You may include courses not presently offered by our college.

(68)

1 Yes; what course(s) _____
2 No

4

We would appreciate any comments regarding how we could improve the courses you have completed and/or services we have provided. Use back of college letter for additional space.

THANK YOU FOR ASSISTING US IN THIS SURVEY! PLEASE RETURN THIS FORM IN THE PRE-PAID ENVELOPE AS SOON AS POSSIBLE!

IF YOU HAVE ANY QUESTIONS PLEASE CALL 353-5400, EXT. 480.

Exit Interview

DEFINITION: Survey to be administered by Counselors to all students who officially withdraw from DCCC prior to the completion of the semester.

A. Confidential Exit Interview was administered during Winter 1977. Analyses are available by sex and curriculum.

B. Exit Interview is to be administered by Counselors during Fall 1977.

DCCC EXIT INTERVIEW

Student No. ☐☐☐☐☐☐☐

Today's Date ☐☐ (13) Mo. (14) ☐☐ (15) Day (16) ☐☐ (17) Yr. (18)

1 Please circle the reason(s) for your college withdrawal. (circle as many as apply)

(19-31)
1 Attendance problems
2 Grade problems
3 Dissatisfied with instruction
4 Found job in occupation related to course(s) completed at this college
5 Transportation problems
6 Conflicting job hours
7 Dissatisfied with content of course(s)
8 Dissatisfied with college in general
9 Change of residence
10 Financial reasons
11 Personal/family illness or injury
12 Other personal/family reasons
13 Other (describe) _____

2 Do you plan to enroll at this college in the future?

(32)
1 Yes; when? → (33) 1 Next Fall, 2 Next Spring, 3 Next Summer, 4 Later Date
2 No
3 Undecided

3 Are you currently employed?

(34)
1 Yes → How many hours per week? (35) 1 Less than 31, 2 31 to 40, 3 Over 40
2 No

4 If you have used any of the college services, below, please rate them according to how well they fulfilled your individual needs.

		Very Good	Good	Neutral	Poor	Very Poor
a. Financial aids	(36)	5	4	3	2	1
b. Counseling	(37)	5	4	3	2	1
c. Job placement service	(38)	5	4	3	2	1
d. Course advisement	(39)	5	4	3	2	1
e. Tutoring services	(40)	5	4	3	2	1
f. Veterans services	(41)	5	4	3	2	1
g. Learning lab/packages	(42)	5	4	3	2	1
h. Cultural activities	(43)	5	4	3	2	1
i. Library services	(44)	5	4	3	2	1
j. Student recreational activities	(45)	5	4	3	2	1
k. Day care services	(46)	5	4	3	2	1
l. Career Center	(47)	5	4	3	2	1
m. Scheduling for classes and Registration	(48)	5	4	3	2	1
n. Admissions/placement	(49)	5	4	3	2	1
o. Individual career counseling	(50)	5	4	3	2	1

5 Which statement best describes your feeling about your educational experience at this college?

(51)
1 Very satisfied
2 Satisfied
3 Neutral
4 Disappointed
5 Very disappointed

6 When did you choose your classes for this semester?

(52)
1 As a new student, I chose them at pre-planning
2 As a new student, I went to "walk-in" registration
3 As a returning student, I chose my courses at pre-registration
4 As a returning student, I went to "walk-in" registration
5 Other

Non-Returning Students

DEFINITION: All students who leave DCCC without reaching their stated educational objectives.

A. Those students who enrolled for Winter 1976 but did not enroll for Fall 1976. Analyses are available by curriculum, sex, age, veterans status, full-time/part-time status, type of degree, and time since withdrawal.

B. In progress survey of students who enrolled for Fall 1976 but did not enroll for Winter 1977. Mailing date of June 22, 1977. Results to be analyzed in October 1977.

PROJECT FOLLOW-UP

40

Please make corrections to the information above if necessary.

PLEASE CIRCLE APPROPRIATE NUMBER(S) WITHIN EACH CATEGORY BELOW. (e.g. ①)

BEGIN HERE

SECTION A ↓ EVERYONE SHOULD ANSWER THIS SECTION.

1 (12) What was your PRIMARY objective in attending our two-year college? (circle one)

1 Improvement of existing "job skills"
2 Preparation for "job to be obtained"
3 Transfer to a 4 year college
4 Personal interest
5 Other (describe) _____

2 (13) How much education is (or was) required to accomplish your educational objective at our college?

1 Selected course(s)
2 Certificate program
3 Two-year Associate Degree program
4 Other (describe) _____

3 (14) To what extent has this objective been completed?

1 Fully completed
2 Partially completed
3 Not completed

4 (15) Do you plan to pursue this objective further?

1 Yes; where? (16)
   1 At our College
   2 At another College
   3 Other (describe)
2 No

5 (17, 18) What was your principal reason for NOT re-enrolling at our college? (circle one)

1 Completed needed courses
2 Transportation problems
3 Transferred to another college
4 Found job in occupation related to course(s) completed at this college
5 Found job
6 Conflicting job hours
7 Financial reasons
8 Change of residence
9 Grade problems
10 Dissatisfied with instruction
11 Dissatisfied with content of courses
12 Personal/family illness or injury
13 Other personal/family reasons
14 Major not available at DCCC
15 Unsure of educational goals
16 College studies too time consuming
17 Courses not available at convenient times
18 Other (describe) _____

52

6 (19) Which statement best describes your feeling about your educational experience at our college?

1 Very satisfied
2 Satisfied
3 Neutral
4 Disappointed
5 Very disappointed

7 If you have completed courses in your MAJOR FIELD OF STUDY please rate them according to how well they fulfilled your individual needs. Students with "undecided" majors should skip to next question.

		Very Good	Good	Neutral	Poor	Very Poor
a. Quality of instruction	(20)	5	4	3	2	1
b. Grading/Testing	(21)	5	4	3	2	1
c. Instructor interest	(22)	5	4	3	2	1
d. Content of course(s)	(23)	5	4	3	2	1
e. Instructional media	(24)	5	4	3	2	1
f. Class size	(25)	5	4	3	2	1

8 If you have used any of the college services, below, please rate them according to how well they fulfilled your individual needs.

		Very Good	Good	Neutral	Poor	Very Poor
a. Financial aids	(26)	5	4	3	2	1
b. Counseling	(27)	5	4	3	2	1
c. Job placement service	(28)	5	4	3	2	1
d. Course advisement	(29)	5	4	3	2	1
e. Tutoring services	(30)	5	4	3	2	1
f. Veterans services	(31)	5	4	3	2	1
g. Learning lab/packages	(32)	5	4	3	2	1
h. Cultural activities	(33)	5	4	3	2	1
i. Library services	(34)	5	4	3	2	1
j. Student recreational activities	(35)	5	4	3	2	1
k. Day care services	(36)	5	4	3	2	1
l. Career counseling services	(37)	5	4	3	2	1
m. Scheduling & Registration	(38)	5	4	3	2	1
n. Admissions/placement	(39)	5	4	3	2	1
o. Health Center	(40)	5	4	3	2	1

9 (41) Which one of the below best describes your present status? (circle one)

1 Employed, full time
2 Employed, part time
3 Unemployed, seeking employment
4 Military, full time active duty
5 Continuing education at higher level
6 Unavailable for employment (describe)

SECTION B

IF YOU HAVE BEEN EMPLOYED SINCE YOU LEFT OUR COLLEGE, PLEASE ANSWER THIS SECTION.

1

(41) A. IF YOU ARE CURRENTLY EMPLOYED, is your present occupation related to the courses you have completed at our college?

1 Yes, directly related
2 Yes, closely related
3 No

(42) B. IF NO, have you been employed in an occupation related to the courses you completed at our college since you left our college?

1 Yes, directly related
2 Yes, closely related
3 No (IF NO, Go to Section C)

2

Please circle below if the course(s) you took at our college helped you in your occupational area in any of the following ways. (circle all that apply)

(43) 1 Helped to obtain job
(44) 2 Helped performance on present job
(45) 3 Helped advance on present job
(46) 4 None of the above
(47) 5 Other (describe)_____

3

(48) How would you rate the training you received at our college in relation to its usefullness to you in performing your job?

1 Very good
2 Good
3 Neutral
4 Poor
5 Very Poor

4

(49) Would you recommend the course(s) taken at our college to others employed in positions similar to yours?

1 Yes
2 Undecided
3 No

(50) Were you employed in your occupational area PRIOR to enrolling in the course(s) completed at our college?

1 Yes
2 No

SECTION C

IF YOU HAVE ENROLLED IN ANOTHER COLLEGE SINCE YOUR ENROLLMENT AT OUR COLLEGE, PLEASE ANSWER THIS SECTION.

1

(51) What is the name of your current (or most recently attended) college?

Name_____

City and State_____

2

(52) Did you have problems transferring to the college indicated above?

1 Yes; what?
(53) 1 Transferring credit hrs.
(54) 2 Transcript problems
(55) 3 Admission problems
(56) 4 Other (describe)_____

2 No

3

(57) How many credit hours earned at our college were not accepted at the college indicated above?

1 All credit hours accepted
2 Lost 1 - 3 credit hours
3 Lost 4 - 6 credit hours
4 Lost 7 - 12 credit hours
5 Lost 13 - 21 credit hours
6 Lost more than 21 credit hours

41

4

(58) In your opinion, how well did our college prepare you for continuing your education?

1 Very good
2 Good
3 Neutral
4 Poor
5 Very poor

5

(59) If you are currently enrolled in college, please indicate your current status and classification at the college indicated above.

Status
1 Part-time student (less than 12 hours)
2 Full-time student (12 or more hours)

(60) Classification
1 Freshman or 1st year
2 Sophomore or 2nd year
3 Junior or 3rd year
4 Senior
5 Graduate student

SECTION D

ALL STUDENTS SHOULD ANSWER THIS SECTION.

1

(61) How do you see the course(s) completed at our college in terms of your career plans:

1 Of immediate, direct benefit
2 Of long term, direct benefit
3 Of indirect benefit
4 Of no benefit

2

(62) Are you interested in taking other courses at our college? You may include courses not presently offered by our college.

1 Yes; what course(s)_____
2 No

3

(63) During the last 2 semesters (or less) that you were enrolled were you employed in a job? (circle one)

1 Not employed at all
2 Employed 1-10 hours/week
3 Employed 11-20 hours/week
4 Employed 21-35 hours/week
5 Employed 36 or more hours/week

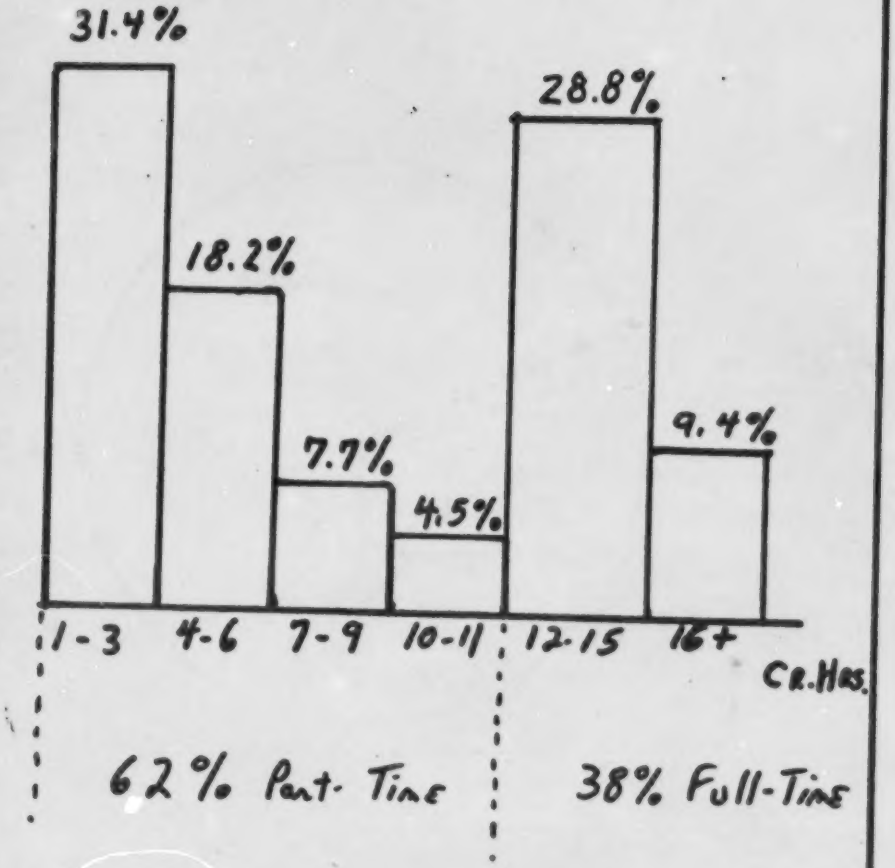
4

We would appreciate any comments regarding how we could improve the course(s) you have completed and/or services we have provided. Use back of college letter for additional space.

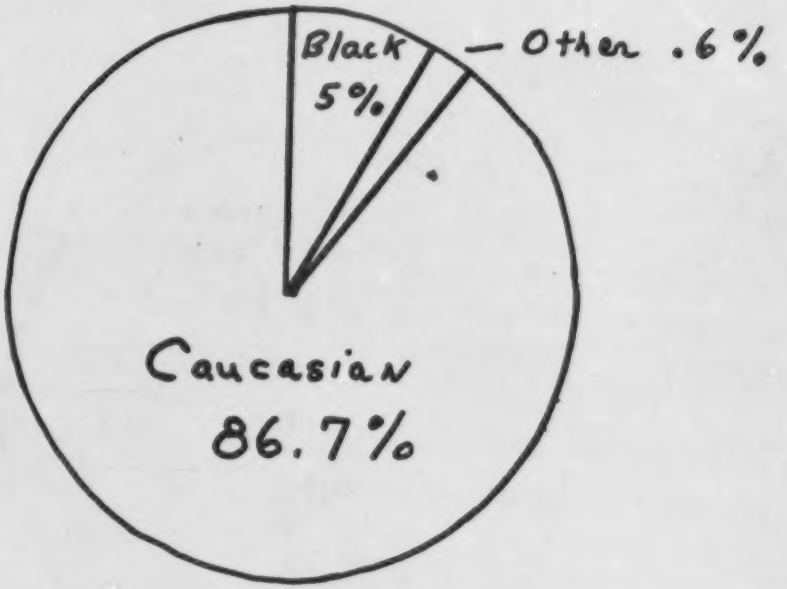
THANK YOU FOR ASSISTING US IN THIS SURVEY! PLEASE RETURN THIS FORM IN THE PRE-PAID ENVELOPE AS SOON AS POSSIBLE!

IF YOU HAVE ANY QUESTIONS PLEASE CALL 353-5400, EXT. 480.

PROFILE-FALL 77 - ENTERING CLASS



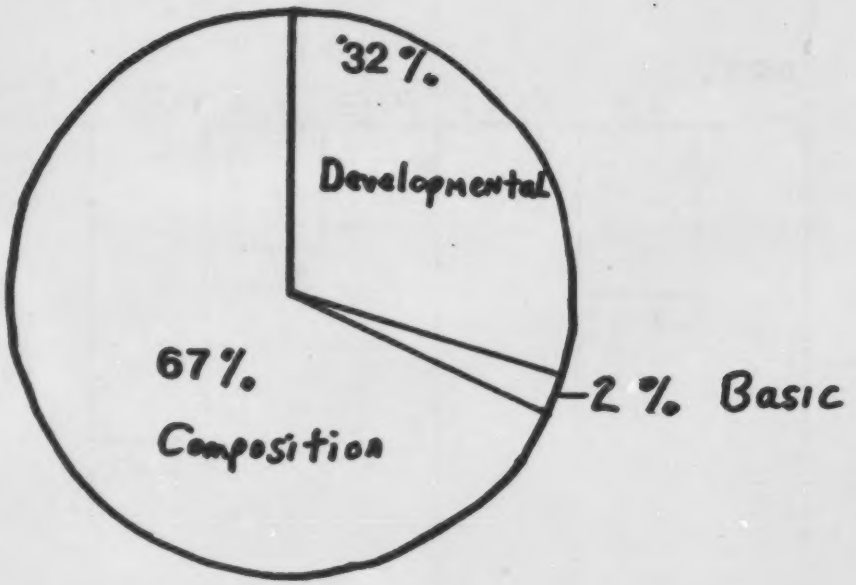
ENROLMENT STATUS



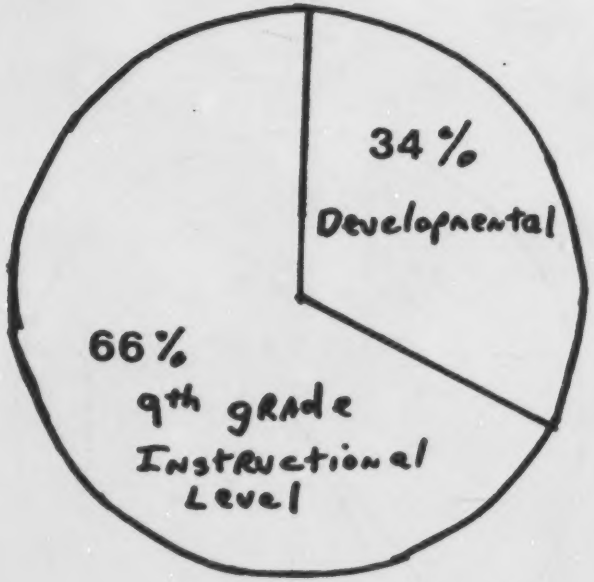
ETHNIC GROUPS

PROFILE-FALL 77 - ENTERING CLASS

DCCC PLACEMENT TEST SCORES



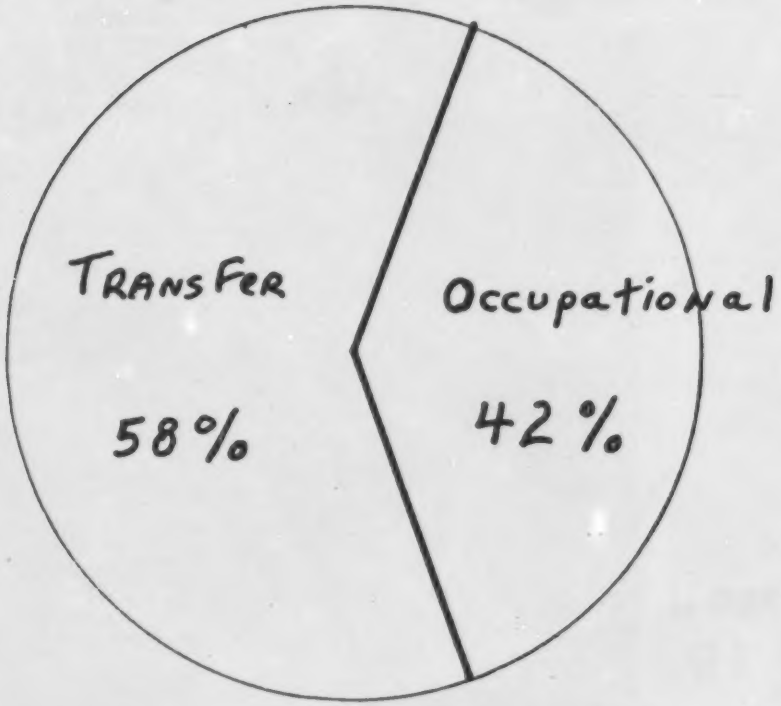
ENGLISH



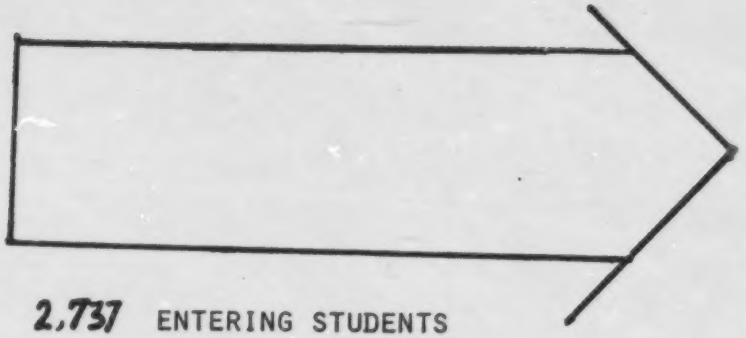
READING

MEAN	41.4
MEDIAN	44.9
Mode	47.0

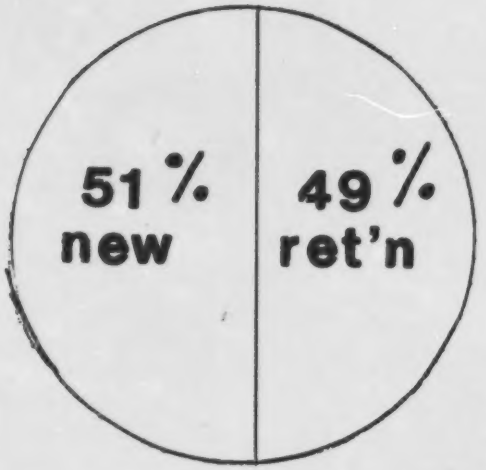
PROFILE-FALL 77 - ENTERING CLASS



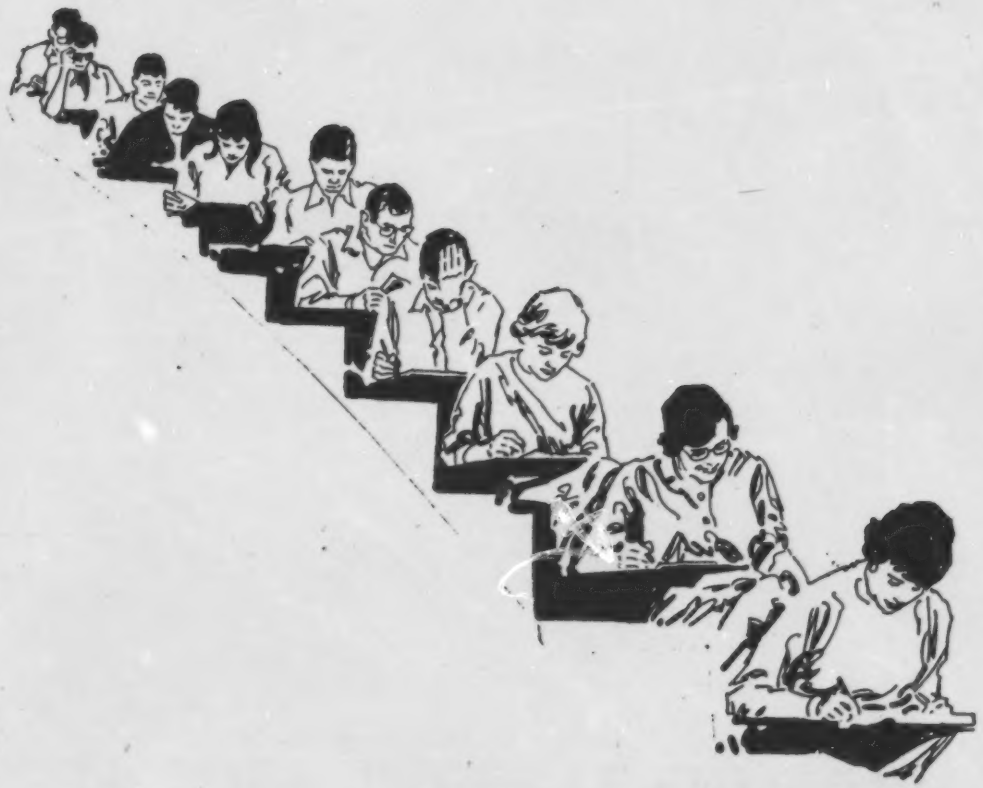
PROFILE-FALL 77 - ENTERING CLASS



2,737 ENTERING STUDENTS



5,321 TOTAL FALL 77 ENROLLMENT



PROGRAM PROFILE ELEMENTS

I. Enrollment

This section includes basic enrollment information reported by semester and academic year averages.

- Headcount of students
- Full-time equivalent students
- Average credit hours enrolled per full-time equivalent student
- Percentage male students/percentage female students
- Number of new and readmitted students/percentage of new and readmitted students
- Percentage of students returning from previous semester
- Percentage freshman students (less than 30 credits earned)/percentage sophomore students (30 or more credits earned)
- Percentage part-time students / percentage full-time students

II. Academic Performance

This section breaks out by curriculum several indices of academic performance.

- Number and percentage of withdrawals from the College at the end of the semester
- Number and percentage of graduates

- Number and percentage of students qualifying for academic honors
- Number and percentage of students on academic probation
- Median semester grade point average
- Mean semester grade point average
- Median percentage of semester credits earned
- Mean percentage of semester credits earned

III. Graduating Students Survey

This section presents selected results of the most recent survey of graduating students - 1976 graduates. In future profiles, the results of long term alumni surveys will be added.

IV. Non-Returning Student Survey

This section presents selected results of the survey of students who were enrolled in Winter 76 semester but did not return the next Fall 77 semester.

In future years, these results will be separated into two catagories - students who accomplished their goals at DCCC and students who did not accomplish their goals at DCCC.

PROGRAM NAME Accounting (167)

PROGRAM PROFILES 1976-77

I. ENROLLMENT	FALL 1976	WINTER 1977	ACADEMIC YEAR AVERAGE
# Students	189	174	182
# FTE	103	96	100
Average Credits/FTE	12	13	12.5
% Male/Female	35/65	33/67	33/67
# & % New Students	96/51	56/32	76/42
% Returning from Previous Semester	49	67	58
% Freshman/Sophomore	90/10	83/17	87/13
% Part-time/Full-time	69/31	71/29	70/30
II. ACADEMIC PERFORMANCE			
# & % Withdrawals	15/7	18/10	33/9
# & % Graduates			12/6.6
# & % Honors		16/9.2	
# & % Probation		25/14.4	
Median Semester GPA		3.00	
Mean Semester GPA		2.62	
Median % Semester Credits Earned		99	
Mean % Semester Credits Earned		86.1	

PROGRAM NAME Accounting (167)

III. RESULTS OF GRADUATING STUDENT SURVEY (1976 Graduates)

	Number	Percentage
Respondents		
Employed full-time	1	50
Employed full-time in related field	1	100
Employed full-time in job with career potential	1	100
Mean full-time salary	$7,332	
Applied to 4-year college	1	50
Admitted to 4-year college		

IV. NON-RETURNING STUDENT SURVEY (Enrolled Winter 76, not enroll Fall 76)

#1 Reason for leaving DCCC - conflict between job and studies

#2 Reason for leaving DCCC - learned what I came to learn

#3 Reason for leaving DCCC - major or courses not available at DCCC

#1 factor which, if improved, would have encouraged student to stay - scheduling of classes

#2 factor which, if improved, would have encouraged student to stay -

#1 current activity - working in a job

#2 current activity - attending or plan to attend school

#3 current activity - caring for home and/or family

DCCC USE OF N.C.H.E.M.S. COSTING AND SIMULATION MODELS

TWO COMPONENTS: HISTORICAL COSTING; SIMULATION MODEL

... INFORMATION EXCHANGE PROCEDURES (IEP)

.. DEVELOPED YEARLY SINCE 1974

.. BASIC DESCRIPTIVE DATA FOR STAFF,FINANCES,STUDENTS,FACILITIES

.. UNIT COST FOR DISCIPLINES

.. UNIT COST FOR PROGRAMS

.. FULL COSTING ALLOCATION PROCESS FOR PROGRAMS AND DISCIPLINES

.. COMPARATIVE ANALYSIS WITH PREVIOUS YEARS

.. COMPARATIVE ANALYSIS WITH OTHER INSTITUTIONS

.. PRESENTATIONS TO FACULTY AND STAFF

... RESOURCE REQUIREMENTS PREDICTION MODEL (RRPM)

.. PRODUCED SEVERAL TIMES DURING EACH YEAR

.. USED FOR BUDGET ESTIMATE

.. USED FOR FACULTY STAFFING ESTIMATE

.. USED FOR ESTIMATION OF COURSE SCHEDULE REQUIREMENTS

INFORMATION EXCHANGE PROCEDURES

A SET OF GUIDELINES USED TO COLLECT:

- FINANCIAL DATA (FLOW OF FUNDS, COST ANALYSIS,...)
- PERSONNEL DATA (FACULTY/STAFF SALARY, WORKLOAD PATTERNS...)
- STUDENT DATA (HEADCOUNTS, TEST SCORES, FINANCIAL AID...)
- FACILITIES DATA (BUILDINGS, LAND, DEBT...)
- OUTCOMES DATA (STUDENT PLACEMENT, STUDENT FEEDBACK...)

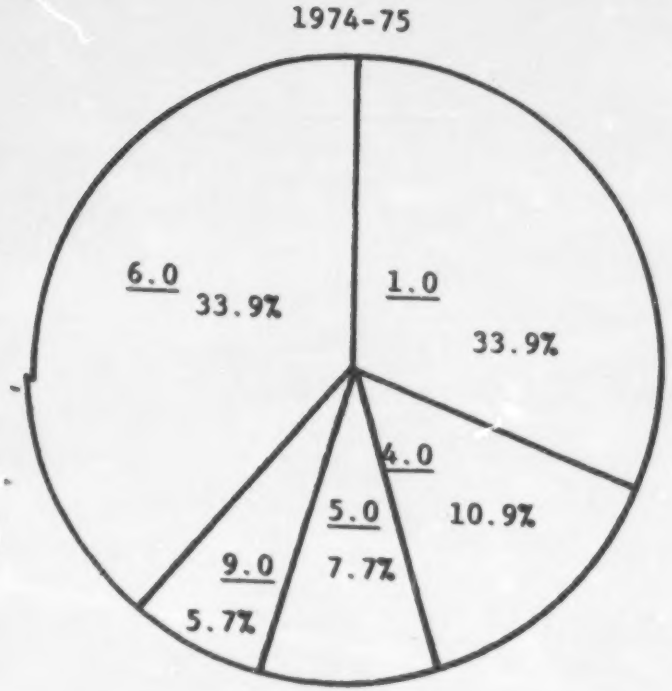
THE RESULTING SET OF INFORMATION IS USEFUL FOR COMPARISONS OF:

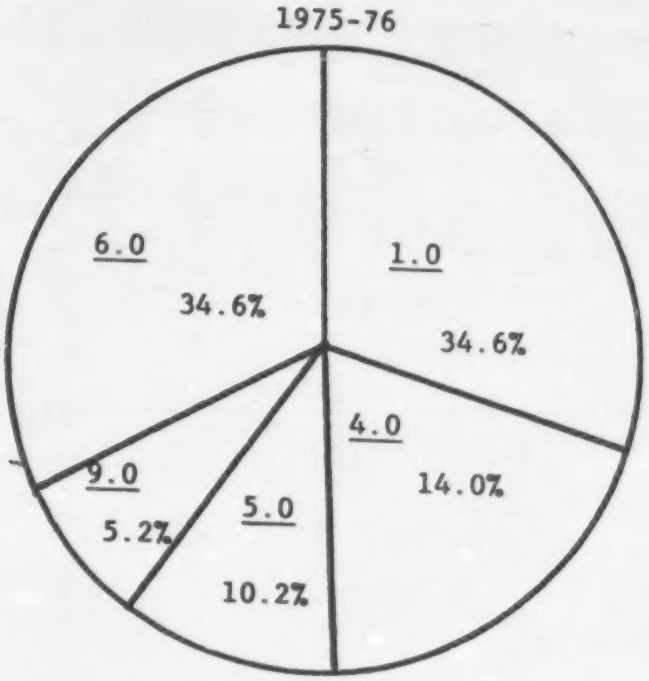
- LEVELS OF ACTIVITY ACROSS THE CAMPUS FOR A SINGLE YEAR
  - --WHAT DID IT COST YOU TO TEACH COURSES IN DIFFERENT DISCIPLINE AREAS?
  - --WHAT PROPORTION OF CAMPUS RESOURCES WERE USED BY THE VARIOUS CAMPUS PROGRAMS?
- SIMILAR ACTIVITIES OVER A SERIES OF YEARS
  - --TRENDS IN COST PER STUDENT BY MAJOR;
  - --SHIFTS IN PLACEMENTS, TYPES OF STUDENTS, TYPES OF FACULTY...
- ACTIVITIES AT YOUR CAMPUS WITH THOSE OF A SIMILAR CAMPUS
  - --SIMILARITY IN OPERATING PATTERNS, WORKLOADS, FINANCE...
  - --SIGNIFICANT DIFFERENCES IN TOTAL AND AVERAGE COSTS

THE INFORMATION ARE USEFUL TO MANAGERS BY PROVIDING:

- BROAD INDICATORS OF CHANGE IN REVENUE, COST, OR OPERATING PATTERNS;
- A HISTORICAL BASE FOR INCREMENTAL, FORMULA, OR PROGRAM BUDGETING;
- A SET OF ANALYTIC DATA TO EVALUATE PLANNED AND ACTUAL ACTIVITIES;
- A SET OF FACTS THAT DESCRIBE CAMPUS OPERATIONS

PROPORTION OF EXPENDITURES
BY PROGRAM FOR DCCC 1974-75 & 1975-76





1.0 Instruction

4.0 Academic Support

5.0 Student Services

6.0 Institutional Support

9.0 IEP Special Accounts

PROPORTION OF EXPENDITURES
FOR DCCC PROGRAM 1.0 - INSTRUCTION

1.1 College & University Parallel

1.2 Occupational & General

1.3 Community Education

1.4 Developmental & Basic

D.C.C.C.
DIRECT COST SUMMARY COMPARISON
1974-75 & 1975-76

Program	75-76 Direct Cost	75-74 Direct Cost	% Change	75-76 % of Total
1.0 Instruction				
1.1 College & University Parallel	1,099,171	834,875	+ 31.6	19.8
1.2 Occupational & General	583,735	407,041	+ 43.4	10.5
1.3 Community Education	109,933	86,829	+ 26.6	1.9
1.4 Developmental & Basic	128,331	95,586	+ 34.2	2.3
	1,921,170	1,424,331	+ 34.9	34.6
4.0 Academic Support				
4.1 Library	149,266	108,526	+ 37.5	2.7
4.3 Instructional Media	176,174	113,723	+ 54.9	3.1
4.4 Computing Support	39,803	35,000	+ 13.7	.7
4.6 Academic Administration	359,062	202,594	+ 77.2	6.4
4.7 Course & Curriculum Development	100,515	58,362	+ 72.2	1.8
	824,821	531,330	+ 55.0	14.9
5.0 Student Support				
5.1 Student Personnel	45,052	57,855	- 23.1	.8
5.2 Student Activities	133,128	30,235	+340.0	2.4
5.3 Counseling & Career Center	305,174	101,062	+201.9	5.5
5.5 Health Services	57,087	7,918	+620.9	1.0
5.6 Intercollegiate Athletics	25,671	19,991	+ 28.4	.4
	566,115	217,061	+160.0	10.2
6.0 Institutional Support				
6.1 Executive Management	327,838	308,453	+ 6.2	5.9
6.2 Fiscal Operations	153,464	107,892	+ 42.2	2.7
6.3 General Administrative Services	201,002	205,871	- 2.3	3.6
6.4 Logistical Services	320,548	305,412	+ 4.9	5.7
6.5 Physical Plant Operations	661,674	527,517	+ 25.4	11.9
6.7 Public Relations	92,390	39,284	+135.1	1.6
6.8 Admissions & Records	159,028	108,042	+ 47.0	2.8
	1,915,947	1,602,468	+ 19.5	34.5
9.0 IEP Special Accounts				
9.1 Student Wages	87,895	83,283	+ 5.5	1.6
9.3 Capital Cost - Buildings & Grounds	47,448	-		.8
9.4 Capital Cost - Equipment	183,296	-		3.3
	318,642	83,283		5.7
Comparable Total	5,315,951	4,192,069	+ 26.7	
Total	5,546,695			

FISCAL YEAR STUDENT CREDIT HOURS BY PROGRAM

	Program	Actual 74-75	Actual 75-76	Projected 76-77	Projected 77-78
UNK	Unknown	207	507	-	-
000	Undecided	10600	2478	-	-
010	Business Administration	9751	15068	16520	16660
011	Business Education	31	-	-	-
012	Elementary Education	376	-	-	-
013	Secondary Education	178	-	-	-
014	Journalism	107	-	-	-
015	Liberal Arts	22788	29816	33586	34412
017	Engineering	144	-	-	-
018	Engineering	1209	1986	2077	2132
019	Pre Pharmacy	18	-	-	-
020	Pre Dentistry	25	-	-	-
021	Pre Medicine	36	-	-	-
022	Pre Veterinary	67	-	-	-
023	Accounting	33	-	-	-
024	Natural Science	4027	6302	6482	7202
125	General Education	973	7742	11518	11518
150	Business Management	2031	2375	3111	3382
151	Civil Engineering Technology	12	-	-	-
152	Clerical Studies	112	272	450	530
153	Data Processing	1586	3140	3768	4091
155	Electronic Technology	32	-	-	-
156	Administration of Justice	4061	6358	7204	7481
157	Fire Science Technology	198	350	416	416
158	Medical Technology	119	-	-	-
159	Early Childhood Education	2223	3234	3695	3754
160	Nursing	3181	3828	3781	3781
161	Retail Management	1042	1457	1796	1851
162	Executive Secretarial Studies	1952	2117	2737	2910
164	Respiratory Therapy	459	552	578	578
165	Hotel/Restaurant Management	1578	1840	2177	2432
166	Applied Technology	1845	2696	3588	3643
167	Accounting	772	2555	3813	3866
168	Legal Secretarial	328	1408	1662	1662
169	Construction Technology	-	3	-	-
175	Career Education	-	51	-	-
180	Basic	65	-	-	-
256	Law Enforcement	21	-	-	-
	TOTAL	72187	96135	108959	112301

7/1/76

FISCAL YEAR STUDENT CREDIT HOURS BY DISCIPLINE

Discipline	Actual 74-75	Actual 75-76	Projected 76-77	Projected 77-78
Accounting	3783	4995	5781	5920
Administration of Justice	2826	3456	9079	4099
Business	4282	4956	5790	5982
Data Processing	1633	2701	3291	3442
Early Childhood Education	1133	1316	1465	1492
Economics	897	1227	1472	1492
Education	339	681	807	824
Fire Science Technology	138	297	469	472
History	5895	7449	8187	8355
Health/Physical Education	76	84	103	105
Hotel/Restaurant Management	625	619	753	831
Political Science	2019	2421	2759	2821
Psychology	6161	8607	9418	9607
Retail Management	384	339	374	388
Secretarial	1330	2148	2589	2713
Social Science	9	-	-	-
Sociology	3981	4476	4712	4816
	35511	45772	51949	53359
Art	1422	1704	2058	2103
Drama	333	403	464	475
English	11709	15987	18159	18627
French	186	243	284	290
Humanities	453	618	776	799
Music	517	1019	1199	1225
Philosophy	1401	1542	1769	1803
Reading	1007	1644	1704	1757
Spanish	474	489	596	608
	17502	23649	27009	27687
Biology	4028	5682	6046	6102
Chemistry	1698	2401	2646	2673
Construction Technology	-	687	613	649
Engineering	66	-	-	-
Electro-Mechanical Technology	124	180	217	234
Mathematics	7634	11082	12414	12707
Mechanical/Engineering Technology	116	138	160	173
Nursing	2137	2421	2530	2536
Physical Science	1223	1699	1565	1589
Physics	468	523	638	657
Respiratory Therapy	314	324	371	372
Science	312	308	404	417
Technology	1049	951	1061	1121
	19169	26396	28665	29230
Cooperative Work Experience	-	216	282	303
General Career Studies	-	102	103	109
TOTAL	72187	96135	108008	110688

7/1/76

FISCAL YEAR FTE FACULTY BY DISCIPLINE

	76-77 AY FT	76-77 AY PT	76-77 SS PT	76-77 FY Total	77-78 AY FT	77-78 AY PT	77-78 SS PT	77-78 FY Total
Accounting	3.81	1.64	.50	5.95	3.90	1.68	.51	6.09
administration of Justice	2.11	.91	.25	3.27	2.17	.94	.26	3.37
Business	3.68	1.59	.31	5.58	3.80	1.64	.32	5.76
Data Processing	2.55	1.10	.13	3.78	2.66	1.15	.14	3.95
Early Childhood Education	1.23	.53	.09	1.85	1.25	.54	.09	1.88
Economics	1.10	.48	.04	1.62	1.13	.49	.03	1.65
Education	.71	.31	-	1.02	.74	.32	-	1.06
Fire Science Technology	.44	.19	-	.63	.44	.19	-	.63
History	4.78	2.06	.64	7.48	4.88	2.10	.65	7.63
Health/Physical Education	.06	.03	-	.09	.06	.03	-	.09
Hotel/Restaurant Management	.88	.38	.12	1.38	.97	.42	.14	1.53
Political Science	1.83	.79	.29	2.91	1.87	.81	.29	2.97
Psychology	5.34	2.29	.79	8.42	5.45	2.34	.80	8.59
Retail Management	.26	.12	.05	.43	.28	.12	.05	.45
Secretarial	2.74	1.18	.15	4.07	2.87	1.24	.16	4.27
Sociology	3.26	1.40	.70	5.36	3.33	1.44	.71	5.48
Business & Social Science House	34.78	15.00	4.06	53.84	35.80	15.45	4.15	55.40
Art	1.75	.75	-	2.50	1.78	.77	-	2.55
Drama	.41	.18	-	.59	.42	.19	-	.61
English	17.14	7.35	1.53	26.02	17.59	7.54	1.57	26.70
French	.57	.25	-	.82	.58	.26	-	.84
Humanities	.47	.21	-	.68	.48	.21	-	.69
Music	1.55	.67	-	2.22	1.58	.69	-	2.27
Philosophy	1.22	.53	.14	1.89	1.25	.54	.14	1.93
Reading	1.98	.85	.25	3.08	2.03	.88	.26	3.17
Spanish	.64	.28	-	.92	.65	.29	-	.94
Communications & Humanities House	25.73	11.07	1.92	38.72	26.36	11.37	1.97	39.70
Biology	4.64	2.00	.79	7.43	4.69	2.02	.80	7.51
Chemistry	2.05	.89	.33	3.27	2.08	.90	.33	3.31
Electro-Mechanical Technology	.25	.12	-	.37	.28	.12	-	.40
Mathematics	10.11	4.34	.84	15.29	10.36	4.44	.86	15.66
Mechanical/Engineering Technology	.44	.20	-	.64	.47	.21	-	.68
Nursing	5.20	2.24	.38	7.82	5.08	2.18	.58	7.84
Physical Science	1.22	.53	.42	2.17	1.25	.54	.43	2.22
Physics	1.08	.47	-	1.55	1.12	.49	-	1.61
Respiratory Therapy	.80	.35	-	1.15	.80	.35	-	1.15
Science	.39	.17	-	.56	.40	.18	-	.58
Technology	.82	.36	-	1.18	.86	.38	-	1.24
Natural & Applied Science House	27.00	11.67	2.76	41.43	27.39	11.81	3.00	42.20
COLLEGE TOTALS	87.51	37.74	8.74	133.99	89.55	38.63	9.12	137.30

59

74

7/1/76

75

DCCC COMMUNITY NEEDS ASSESSEMENT PROJECT

BASIC CONCEPTS

... UNMET EDUCATIONAL NEEDS OF COMMUNITY RESIDENTS ARE VITAL TO PROGRAM PLANNING

... EDUCATIONAL NEEDS ARE BROADLY DEFINED:

PREPARATION FOR ENTRY INTO CAREER

JOB SKILLS TRAINING FOR IMPROVEMENT OF PRESENT JOB

COLLEGE TRANSFER PROGRAMS

NON-CREDIT PROGRAMS FOR PERSONAL INTEREST

EDUCATIONAL AND CAREER COUNSELING SERVICES

COURSES TO PROVIDE PRACTICAL SKILLS

... REPRESENTATIVE SAMPLE OF ALL COUNTY RESIDENTS 17 YEARS OR OLDER

... TELEPHONE SURVEY IS MOST RESPONSIVE AND ECONOMICAL METHOD

... SEEK TO IDENTIFY "MARKET SEGMENTS" BY INTEREST AND PRESENT EDUCATIONAL ACTIVITY

SURVEY DESIGN

... FIRST STEP- EDUCATIONAL MARKET SEGMENT SCREENING

... SECOND STEP- ASSESS INTEREST IN SPECIFIC PROGRAMS AND SERVICES

... THIRD STEP- DETERMINE TIME, COST, LOCATION PREFERENCES

... FOURTH STEP- IDENTIFY BARRIERS; IE., COST, CHILD CARE, TRANSPORATION, ETC.

... FIFTH STEP- DEMOGRAPHIC DATA

A COMPREHENSIVE ASSESSMENT OF ADULT EDUCATIONAL NEEDS IN DELAWARE COUNTY

A Study Conducted for

DELAWARE COUNTY COMMUNITY COLLEGE

by

Response Analysis Corporation
Princeton, New Jersey

March 1978

RAC 4007

SEGMENT 3 -- COUNTY RESIDENTS NOT CURRENTLY ATTENDING COLLEGE BUT WITH ACTIVE NEEDS/PLANS TO ATTEND

In many fundamental ways, this segment constitutes DCCC's "primary market target" -- persons who are motivated to get more education and who have active plans to pursue a specific program or course.

In terms of size this is a larger segment than either of the previous two, a total of 405 of the 1,991 respondents are "interested but not attending." This is projectable to 78,721 (20.34%) of adults in Delaware County.

Segment 3 members have the following demographic characteristics:

- In terms of age, heavily skewed toward young adults -- 41% are in the 21-29 age group.
- This segment closely matches the overall distribution of Delaware County adults on amount of education -- adults with no high school diploma to those who have already received a college education seem interested in getting more education.
- Nearly three-quarters (72%) are employed and three-quarters of those are employed full time. Professional/technical (25%) and clerical (17%) are the predominant job categories among the persons in Segment 3; 40% are their household's chief wage earners.
- Income-wise, Segment 3 members closely mirror the total distribution of Delaware County adults.

Segment 3 members have the following educational and attitudinal characteristics:

- A majority (60%) of Segment 3 members see formal education as equal in importance to practical job experience in getting ahead. In all, 82% see formal education as equal or greater in importance to practical job experience.
- Their primary reasons for seeking more education are to improve their prospects/job situation (62%) and for personal fulfillment/self-improvement (44%).
- Although interested and motivated, nearly two-thirds (64%) of Segment 3 members have taken no specific actions toward enrollment; 18% have sought information but not yet applied.
- Lack of time and lack of money are seen as major barriers to enrollment.
- "Career training" (40%) and "job skills training" (39%) are the educational services of most interest to Segment 3 (interested but not attending) members. All other services except counseling (19%) are desired by at least 20% of the adults in this segment.

- Of those interested in "career training" (40%), "business/ commerce" (30%), "public service" (26%) and "health services/ paramedic technology" (22%) are the strong preferences.

- Of those interested in "job skills training" (39%), "management/ personnel skills" (36%) is the curricular area of strongest appeal.

- Of those interested in a college transfer program (28%), "business/commerce" (22%) again is a focal point of interest. A total of 52% of Segment 3 members give "attainment of a bachelor's degree" as a specific goal.

- Of those interested in "informal/non-credit activities" (27%), the major focus of interest is on "recreational skills" (36%), followed by "hobby skills" (31%), and crafts instruction" (31%).

- Of those interested in "practical skills" (24%), "maintenance" (41%) and "communication skills" (38%) are of most interest.

- Part time evening attendance at the main campus (49%) is the predominant choice of Segment 3 members.

- A total of 60% of Segment 3 members want to begin a course or program within the next year. This is projectable to a total of 46,844 Delaware County adults. A projectable total of 14,189 want to start a course or program by Summer Session 1978.

SEGMENT 4 -- COUNTY RESIDENTS NOT ATTENDING AND NOT INTERESTED

This segment is made up of persons who are not currently enrolled and who foresee no circumstances in which they would seek more education. A total of 892 of the 1,991 survey respondents, projectable to 173,382 adults in the county (44.8%), are not in the "educational market" to any forseeable extent.

Segment 4 members have the following demographic characteristics:

- Significantly older than local adults in the other four segments -- 44% are 50 or older.
- In terms of education, they tend to be high school graduates.
- A slightly higher than normal proportion of Segment 4 members live alone or in a two-person household.
- Fewer persons in this segment as compared to the other two non-enrolled segments are employed -- a reflection of the older age distribution within this group. Among those who do work, clerical positions (24%) lead the list.
- Income wise, Segment 4 is distributed about the same as all Delaware County adults interviewed in this study. They tend to be middle to slightly above middle income.

Segment 4 members have the following educational and attitudinal characteristics:

- Nearly as strong a pro-education orientation as in the other adult segments -- 76% see formal schooling as equal to or greater in importance than practical job experience in getting ahead.
- 77% of Segment 4 members say that further education would not be important for their job or occupation. In this respect, they differ markedly from the other two non-enrolled adult segments.
- Segment 4 members name a variety of reasons or factors inhibiting enrollment -- too busy/not enough time (4[illegible]), cost of courses (27%), lack of energy/interest (16%), and family responsibilities other than child care (15%). Another 11% mention having been away from school too long (too old) and 4% lack confidence.

SEGMENT 5 -- COUNTY RESIDENTS NOT ATTENDING BUT WITH LIMITED INTEREST OR INTEREST IN NON-CREDIT COURSES

The fifth segment is nearly identical in size to the third. A total of 412 of the 1,991 respondents, projectable to 80,082 county adults (20.69%), form a "secondary market target" for DCCC in terms of credit/transfer/career programs and a primary market for DCCC in terms of non-credit/avocational/recreational courses.

Segment 5 members have the following demographic characteristics:

- An age distribution similar to the county total except for slightly higher proportions of adults in the 30-39 and 40-49 age groups.
- A higher educational level than all other adult segments -- 21% of Segment 5 members are college graduates and another 10% have enrolled in graduate-level programs.
- The highest percentage of persons employed full time (56%) of any of the five adult segments. Professional/technical (26%) and clerical (20%) occupational categories lead the list.
- Somewhat higher income than other segments, although 21% refused to report their annual income.

Segment 5 members have the following educational and attitudinal characteristics:

- A strong pro-education orientation -- 87% consider formal education as equal to or greater in importance than practical job experience.
- 60% feel either that courses would not help them in their job or are uncertain that they would. So their interest is not highly related toward career/monetary criteria. In fact, 61% of Segment 5 members say there are no skills they possess that are not already being utilized in their work.
- In the area of informal/non-credit activities (a prime focus of interest for this segment), 42% desire crafts instruction, 41% desire recreational skills, and 40% desire hobby skills.
- Career counseling/interest testing is desired by 38% of Segment 5 adults.
- In the "practical skills" curricular area, 43% of Segment 5 adults want courses in "maintenance."
- "Too busy/not enough time" (43%) and cost of courses (41%) are perceived as the major factors inhibiting enrollment. Only 30% feel that free child care would be apt to stimulate higher enrollment.

- This is the educational segment with the greatest degree of interest in holding classes at public high schools within the county (37%). Their second choice is to hold classes evenings on the main campus (22%).

- Segment 5 members have less immediate or definite enrollment plans than persons in Segment 3 -- 36% want to enroll in a course during the next year and 24% are waiting until a particular program or course of interest becomes available.

- About half (53%) of Segment 5 members would like to receive information about Delaware County Community College. This is projectable to a total of 42,364 county adults. A total of 87% of Segment 5 members report having some knowledge of local adult education programs already.

- Segment 5 members get local information principally from local newspapers (74%), but 70% would favor "mail brochures/catalogs on request" as a means for disseminating information about Delaware County Community College.

SUMMARY OF PROJECTIONS OF EDUCATIONAL NEEDS/PLANS/PREFERENCES OF ADULTS LIVING IN DELAWARE COUNTY

Chapter III

Out of a total base of 387,000 adults in Delaware County, we can project a "pro education" orientation to 97,137; a "pro practical experience" orientation to only 59,985 adults; and a "mixed" orientation to a total of 215,946 local adults.

The feeling or belief that further education would be beneficial to their current or planned occupation is projectable to a total of 120,251 adults residing in Delaware County and not currently attending a post-secondary class or program.

A projectable total of 167,571 Delaware County adults see "lack of time/too busy" as a major factor inhibiting enrollment in adult education programs. A projectable total of 126,549 Delaware County adults see "lack of money/courses too costly" as a major factor inhibiting enrollment.

Chapter IV

Interest in career training and job skills training is projectable to 39,270 Delaware County adults.

Interest in business and commerce is projectable to 14,959 Delaware County adults.

Interest in either management/personnel or math/accounting is projectable to approximately 9,734 Delaware County adults; office skills to 7,010 local adults.

Interest in home and car maintenance and repair is projectable to approximately 46,096 Delaware County adults.

Interest in recreational, hobby, and crafts skills are all projectable to approximately 60,000 Delaware County adults.

At least a projectable 48,770 Delaware County adults say they would probably continue their education if they had available educational advisement. The total figure is probably even higher, since these people come only from the "don't know/non-credit" educational segment.

Interest in career counseling/interest testing is projectable to approximately 39,892 Delaware County adults.

A projectable total of only 8,545 Delaware County adults favor the TV/radio/cassette learning method, whereas a projectable 94,419 favor the traditional lecture/class.

Chapter V

A willingness to pay $100 or more to enroll in a college course is projectable to only 13,867 Delaware County adults.

Interest in taking classes evenings on a part-time basis at DCCC or another local college is projectable to 98,691 Delaware County residents age 18 or older.

The need for free child care as an inducement to enrollment is projectable to 23,945 prospective students from Delaware County.

By projection, a total of 24,466 Delaware County adults want to enroll in a course or program during the next six months. Another 51,135 want to enroll between September 1978 and January 1979.

Chapter VI

Those interested in attending who are looking toward DCCC are projectable to a county total of 9,915; those interested in attending who are looking toward other Delaware County colleges are projected at 4,857.

Interest in getting more information about DCCC and its programs is projectable to 42,364 Delaware County adults in the "don't know/interested in non-credit" educational market segment.

There is a projectable base of 49,988 interested prospective adult students who live in Delaware County who have not yet acted upon their need or desire to obtain additional education.

Chapter VII

According to the survey data, there are 18,089 projectable adult students living in Delaware County whose current courses/programs are related to their current jobs. A projectable total of 3,887 current DCCC students report that their courses at DCCC are related to their current job.

Plans to continue through to degree are projectable to a total of 6,220 current DCCC students.

A total of 17,683 Delaware County students, by projection, have definite plans to continue on to a higher degree.

A projectable 4,859 of current DCCC students appear to have been attracted to DCCC because of its accessible location. A projectable 4,082 of current DCCC students have been attracted because of low costs of enrollment at DCCC.

DEFINITION OF EDUCATIONAL SERVICES

COLLEGE TRANSFER -- Courses and Programs Directed at Obtaining a Bachelor's Degree

- Liberal arts/academic
- Architecture/urban studies
- Biology/health sciences
- Business/commerce
- Communications/the arts
- Computer science
- Education
- Engineering
- English/foreign languages
- History
- Mathematics
- Physical science
- Pre-professional
- Psychology/social sciences
- Paraprofessional

CAREER TRAINING -- Courses and Programs Designed to Help a Person Obtain a Job or Change Careers

- Business/commerce
- Data processing
- Health services/paramedic technology
- Mechanical/engineering
- Natural sciences
- Public service

JOB SKILLS -- Programs of Personal Development to Improve Skills Related to Your Job

- Office skills
- Building trades/skills
- Electronics
- Landscape maintenance
- Commercial/graphic arts
- Sales skills
- Management/personnel skills
- Math/accounting skills

INFORMAL/NON-CREDIT ACTIVITIES -- Courses Given on an Informal Non-Credit Basis; for Fun

- Workshops/training in hobby skills
- Crafts instruction
- Performing arts
- Special events (lectures, speeches, discussion groups)
- Recreational skills

EDUCATIONAL/CAREER COUNSELING

Career counseling/interest testing
Financial aid
Job placement
How to find job seminars
Remedial education

PRACTICAL SKILLS -- Courses Designed to Provide Adults with Practical Skills Not Generally Related to Their Employment

Communication skills
Home skills
Child rearing/family relations
Maintenance of car/home/appliances
Personal finance

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IV. APPENDIX

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THE NEED FOR INSTITUTIONAL PLANNING

Richard C. Richardson, Jr., Don E. Gardner, and Ann Pierce

Emphasis on broad-based institutional planning is largely a phenomenon of the seventies (Ohio Board of Regents 1974). One reason is that the value placed on planning varies inversely with the availability of resources (Fuller 1976). The era of declining resources into which many colleges have now moved furnishes both the incentive and the necessity for developing decision processes that will insure preservation of flexibility in the use of funds, assignment of faculty and utilization of space. In these circumstances, both strategic institutional planning and supportive public policy are required if institutions are to do more than survive. (Carnegie Foundation for the Advancement of Teaching 1975). This review is concerned with strategic institutional planning, as distinct from the public policy efforts of statewide planning and coordinating agencies. While the activities of both are important, the latter have received considerably more attention in the literature.

Involvement of faculty with administrators to arrive at a consensus on the need for planning should be a prerequisite to any process aimed at achieving a specific change. This has been confirmed by experiences at a wide range of institutions (Ladd 1970, p. 200). Yet the state of the art of planning for change is not far advanced.

A study of four states (California, Florida, Illinois, New York), chosen because of purported long experience with planning and coordination, revealed that less than half of the eighty institutions involved were engaged in substantive planning. Those that were tended to be private, smaller, and newer. Substantive planning was characterized by broadness of scope, integration of decisions concerning program, facilities and budget, definition of priorities, continuous rather than sporadic activity, use of a research data base, broad participation of faculty and administrators, and emphasis on process rather than the plan itself. More common, expedient planning, by contrast, occurred primarily in response to external pressures from statewide agencies and concerned itself with easily quantified measures in relatively narrow areas (e.g., space utilization, new programs, cost of instruction, student/teacher ratios) useful in statewide coordination (Palola and Padgett 1971).

The evidence pointing to the absence of broad-based institutional procedures capable of sustaining a substantive planning process for all but a handful of colleges and universities is impressive. During the sixties, expanding enrollments and steadily increased support to higher education made expedient planning a reasonably satisfactory response to environmental pressures. However, in a recent study by Lee and Bowen (1975), evidence is presented of a growth in the quality and amount of planning over the last four or five years. Current trends place more emphasis on the planning process as both a means to secure commitment to specific changes and a way to foster a political environment that encourages and supports continuing adaptation (Hollander 1975; Fuller 1976; Vaccaro 1976).

In the present context, the use of complex planning models may be difficult to justify without outside funding. The emphasis must be on simple decision-making procedures that are sufficiently democratic and participative to respond naturally to environmental change (Lockwood 1972). To be effective, planning procedures must be characterized by simplicity, flexibility, the ability to keep pertinent information in focus, and provision for meaningful participation by all concerned. The plan is only one benefit of planning. The real purpose is to achieve results in the pursuit of objectives, and a plan may be detrimental if it cannot be changed easily when changing circumstances dictate the need (Green and Winstead 1975).

Failure to develop strong institutional planning procedures invites the imposition of state-conceived models and requirements. Those who complain about increasing state control should review the adequacy of their internal planning efforts. State-level planning and coordination is most beneficial where there is strong institutional planning backed by accurate data and supported by realism and imaginative analysis (Glenny 1975). While there is no general agreement about the most effective strategy for developing an effective, broad-based institutional planning process, the outline of such a strategy has been defined along with alternatives for implementation.

A FRAMEWORK FOR PLANNING

There is substantial agreement about the essential characteristics of the planning process, although the agreement does not extend to implementation strategies. Effective institutional planning occurs within the broader context of a well-defined mission derived either from statewide planning efforts or some other assessment of external needs and constraints. Quantifiable goals are developed within the parameters of mission statement and mandated priorities. Responsibilities for goal achievement are determined, and the identified units develop specific activities to accomplish goals. The activities become the basis for resource allocation. Periodically, the achievement of goals is evaluated and the results used to assist in formulating new goals (Parekh 1975).

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There is less agreement about *strategies for planning* (Glenny 1975, p. 17). The need to find appropriate and credible procedures for broad staff involvement is recognized, as is the requirement for commitment and active involvement of the president. Three basic positions emerge with respect to *planning structure*. One, represented by the USHER Redesign Model (McFadden 1975), emphasizes planning and its potential for contributing to organizational development. A very elaborate planning structure is set up with a myriad of specially appointed teams. The problem with this approach is its complexity and the demands that would be placed on the time of participants.

A second approach is nonprescriptive statewide coordination, where alternatives are defined and decisions are left to the individual institutions (Ohio Board of Regents 1973). This approach recognizes the diversity of institutions and would be beneficial to statewide coordinating bodies interested in stimulating substantive planning. However, it reflects a lack of recognition of the problems encountered by institutions that have tried to implement planning by relying exclusively on existing committees (Palola and Padgett 1971, p. 30).

The most promising approach relies on the existing structure as much as possible, both to avoid excessive demands on the time of participants and to integrate planning in the regular operation of the organization. At the same time, in recognition of the need for focus and coordination, a general planning committee is appointed consisting of the president, his staff, appropriate administrators, and representatives of the faculty and study body. Depending on the size of the institution, it may be useful to add to the planning committee an analytical studies team elected or appointed from faculty members who have interest and expertise in the planning and budgeting cycle (NACUBO 1975; Parekh 1975).

Some observers have argued that planning for institutional renewal will not meet with success because of constraints imposed by the distinctive nature of the higher education enterprise. Planning frameworks or models are designed to channel future resources and activities into paths that will be productive in the attainment of specific goals and objectives. Unfortunately, institutional goals and objectives in higher education are characterized by researchers as being ill-defined, vague, ambiguous or nonexistent (Palola and Padgett, p. 13; Richman and Farmer, p. 198). Simply stated, the planning skeptics believe that decision-making within the university is so broadly diffused that the process cannot be well understood and will therefore be difficult if not impossible to model (Breneman 1975, p. 79).

QUANTITATIVE ANALYTIC TOOLS

All of the planning frameworks mentioned earlier assume the availability of basic information pertinent to the concerns of faculty and administrators involved in the planning process. To assist in the collection, presentation, analysis, and interpretation of basic planning information, numerous quantitative analytic tools have been developed (McNamara 1971; Schroeder 1973).

The basic contention of those who advocate the use of quantitative analytic tools or models to support planning is that the important variables affecting the future of the institution can be expressed numerically, and related mathematically in ways that approximate reality. Critics respond that the most important factors determining future directions are so imprecise or so often politically derived that a quantitative model will never be accurate enough to deserve any degree of confidence. Worse, a quantitative model may produce results that imply a degree of knowledge and understanding that does not exist (Dresch 1975). In spite of the current limitations of quantitative models, it is difficult to question the importance of access to basic information as a requirement of effective planning. The key to effective use of analytical models in broad-based institutional planning is to view them as tools rather than an end in themselves.

Quantitative planning models must tolerate the imprecision characterizing real-life situations and produce results that are clearly identified as approximations. Analytical models are most useful when their outputs are taken as estimates or rough approximations.

Since the early work of Weathersby, Judy and Levine and others, there have been several major attempts at developing comprehensive quantitative planning and management systems for colleges and universities. Three of the most commonly mentioned products of this type are CAMPUS, the NCHEMS Costing and Data Management Systems (CADMS, which includes RRPM), and the Higher Education Planning System (HEPS). The massive data requirements needed to drive these larger systems are well known and are often cited as one of the major reasons for lack of success in implementation. Hopkins has contended that they have important, little-understood conceptual shortcomings as well, and that reasonable cost predictions can probably be obtained more directly and inexpensively from the personal judgments of experienced educators (Hopkins 1971, p. 477).

A survey of 394 institutions having access to one of four computer models yielded responses from 90 institutions that had implemented or attempted to implement CAMPUS or RRPM. Eighty-five percent of those responding indicated that the model's outputs were either "never" or only "sometimes" used in decision-making, with 15 percent indicating that they were used "often (Plourde p. 26). Portions of HEPS have been implemented at CUNY/Brooklyn, The University of Pittsburgh and Arizona State University. The system contains a large number of relatively rigid report-writing programs that depend on large data bases of information conforming to definitions and structures specified prior to implementation. Compared to HEPS, the NCHEMS/CADMS software is relatively flexible in required data inputs (Gardner 1976).

More typical of quantitative techniques are the computer models that address only one area of university operation. An area that has perhaps received more attention by model builders than any other has been that of physical space utilization and planning. Of the 21 planning models in various stages of development outlined by Casasco, eight were directly concerned with some aspect of space planning, while another five were indirectly concerned. One explanation for the extensive activity in this area is that it is an outgrowth of the pressing need for new facilities to accommodate the rapid growth of the fifties and sixties. Another reason is the nature of the variables involved (number of student stations, number of faculty offices, number of square feet, etc.); there is a relative degree of ease in dealing with items that are easily quantified.

Another type of quantitative planning model that has been explored rather extensively is the faculty flow model. Although the extent to which policy decisions have been affected in a planning context is unknown, several sophisticated flow models exist that provide potential means for predicting the effects of various policy

changes on the future size and composition of a university faculty. Such models have particular utility in situations where stabilized or declining enrollments have raised the issues of tenure quotas and/or retrenchment.

Typically, a faculty flow model is based on assumptions regarding retention/attrition rates as affected by natural factors (such as deaths and voluntary resignations) and policy decisions in the areas of retirement and promotion. Hoenack and Weiler (1977) have postulated a faculty flow model that also considers and predicts the effects of policy decisions in the areas of tuition rates and student recruitment (especially in nontraditional instruction).

The potential utility of a faculty flow model is illustrated in Bloomfield's assessment of a comprehensive faculty flow model developed at Oregon State University (Bloomfield 1977). In his estimation, the most significant benefits derived from implementation of the model were the insights it gave into the problem of an assumed "bulge" in the tenured population that would result from the hiring that took place to accommodate the rapid growth of the mid-sixties. Results from the model seemed to indicate that the tenured/nontenured ratio was much more stable than anticipated, and only "drastic" changes in hiring and promotion policies would affect its future stability (Bloomfield, p. 15).

The need for relatively accurate predictions of future enrollments is a familiar topic because of its close ties to the budgeting processes in both the public and private sectors. A variety of mathematical models exist for assisting university planners in this area, presenting the challenge of selecting techniques which might have the most validity for use at a particular institution. Suslow has recently provided a brief discussion of experiences with several models at the University of California, Berkeley, including Grade Progression, Markov Projections, and Cohort Survival. Suslow concluded that the Cohort Survival Model held the most promise for predictive ability at Berkeley, but admitted that more testing would be required to evaluate reliability over time (Suslow, p. 29).

One of the more common statistical approaches to the problem of predicting enrollments has been the use of linear regression models that attempt to identify variables with consistent predictive ability. Such variables as births eighteen years earlier, ratios of military enlistments, and numbers of high school graduates have been investigated as potential predictors of university attendance (Brown and Savage 1975). Unfortunately, other factors that are much more difficult to identify and quantify, such as the state of the local economy, perceived potential individual financial benefit, and perceived peer status also have a direct effect on enrollments. The historical consistency and nature of these "true" predictive variables are much more difficult to establish, and the available alternatives may have only a coincidental validity that holds true in periods of relatively stable growth. Since the era of relatively stable growth has probably come to an end for most institutions, work in the area of refining projection models will undoubtedly continue.

In the area of financial planning, there have been several attempts to develop mathematical models to assist decision-makers, such as PLANTRAN (developed by the Midwest Research Institute), and the Long-Range Financial Forecast (LRFF) developed at Stanford University (Hopkins and Massy 1977). The latter may be of particular interest to administrators in the private sector because, in conjunction with other tools and procedures, it has demonstrated practical utility in helping administrators assess future budget uncertainties. Formulated in terms of aggregate budget variables, the Stanford planning tools do not require construction of a massive data base of supporting information to be useful. Based on assumptions regarding income from tuition, investments, etc., the Stanford models provide top administrators with the opportunity to explore the possible effects of various kinds of policy decisions (Hopkins and Massy 1977).

Another financial planning model effort has been the development of the Resource Allocation and Management Program (RAMP) by the Illinois State Board of Higher Education. While RAMP was established primarily to assist in the formulation of the budget request at the system level, it has nonetheless had some effect on the internal budgeting and planning processes of the individual institutions. A university "Technical Plan" (a required part of the RAMP process) has been developed and successfully used in budgeting and planning procedures at Illinois State University (Harden and Tcheng 1975).

While the emphasis here has been on computer-based systems and technology, relatively simple, manual systems may also be effective in providing useful information for systematic planning. At the University of Utah a "Resource Allocation and Planning Guide" has been developed. Prepared from a variety of budget and financial reports, enrollment reports and salary summaries, the "Planning Guide" contained data that had been "evaluated, analyzed, and interpreted in reference to timely policy issues and problems facing the university administration." Careful documentation, systematic procedures, and consistent definitions in the preparation of highly synthesized information of this type can insure that administrators have at least a minimum base of essential information for making certain kinds of planning decisions (Gubasta and Kaufman 1977).

IMPLICATIONS

Few would argue that planning and decision-making processes in general ought not to be as rational as possible. In reality, planning and decision-making are generally much more intuitively or politically based than top-ranking administrators care to publicly admit. Weathersby concluded:

> . . . more than a decade of study of the actual decisionmaking process of a public sector in general, and of colleges and universities in particular, shows that rationality would be, at best, a very loose characterization of the decision-making process of these entities. (Weathersby, 1976, p. 98)

There are a number of senior administrators who argue this is the way it ought to be. Judging from practice, most institutional policies as well as public policies derive from political realities more than data analysis. Given this apparent fact of life, the issue of whether resource allocation to sophisticated planning systems can be justified at the institutional level is all too real.

Institutions must furnish the data required by statewide coordinating and governing bodies. Meaningful participation in institutional planning requires a data base. Primary emphasis, however, has to be placed on the process by which plans are developed rather than on the end result. The USHER framework and other planning systems based on Management by Objectives can be detrimental to the institution if implementation is attempted without adequate attention to the conduciveness of the political environment to change (Hamilton and Hinko 1976; Segner and Britton 1976). Stated another way, if the procedure through which a planning system is implemented violates the principles of participation on which the system is based, the consequence can only be rejection and informal resistance among those affected.

The new pressures toward improved college and university planning can constitute a powerful force for institutional renewal if properly utilized. Institutions today are confronted with a clear

mandate for change. The issue is no less than survival for some and the retention of vitality for others. Under such circumstances, faculty knowledge can be merged with effective management principles to produce the type of creative change so essential to the next decade (Clark and Guba 1966). This process can happen only if the more complex quantitative techniques and technologically sophisticated models remain our servants rather than our masters.

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